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ABSTRACT

The monograph covers the background, progress, and outcome of the "Castro case," a racial discrimination lawsuit filed in 1982 by a group of Chicano and Black parents and their children against the Phoenix (Arizona) Union High School District alleging that their 94% minority high school was unfairly singled out for closure due to a declining enrollment problem in the city. The report, written by an expert witness for the plaintiffs, attempts to show how social science research can be brought to bear on such a case. The conceptual framework presented concentrates on the issues of discriminatory intent and impact. Regarding intent, a detailed analysis shows how criteria for conduciveness to school closure used by the district were inherently biased against minority schools. Criteria include comparison of current course offerings, assessment of student achievement and special education and gifted needs, experience of teaching staff, number of teachers by subject area, campus adequacy to serve handicapped students, and educational adequacy. Several theoretical and empirical bases in psychological and educational literature are cited to shed light on the issue of alleged adverse impact on the displaced minority students. These effects are discussed in the context of policy implications for equal educational opportunity. Twelve pages of references conclude the report. (NEC)

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## Understanding School Closures: Discriminatory Impact on Chicano and Black Students

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# Understanding School Closures:
# Discriminatory Impact on Chicano
# and Black Students

Richard R. Valencia
SCCR Visiting Postdoctoral Fellow

Policy Research Monograph
No. 1

Stanford Center for Chicano Research
Stanford University

October, 1984

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Richard R. Valencia received his Ph.D. from the University of California, Santa Barbara in 1977. During 1983-84 he was a postdoctoral fellow (National Research Council Postdoctoral Fellowships for Minorities) at the Stanford Center for Chicano Research. This monograph is an outgrowth of his work as an expert witness in the Phoenix, Arizona *Castro* school closure court case of 1982. Dr. Valencia is presently an Assistant Professor of Education at the University of California, Santa Cruz.

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Finally, and very importantly, I wish to extend my sincere appreciation to the plaintiffs who allowed me to serve them.

Richard R. Valencia, Ph.D.

August, 1984

## PREFACE

At the end of the spring quarter (June, 1982), I was in my office at UC Santa Cruz engaging in my final professorial duty (figuring my students' grades) before my anxiously awaited year-long sabbatical would officially begin. With excitement, I was looking forward to what I refer to as the "3 R's" (running, relaxation, and research). As I pondered the upcoming year, the phone rang and broke my train of thinking. It was a Mr. Albert Flores, attorney in Phoenix, Arizona. He explained to me that he was representing a group of Chicano and Black parents and their children who had filed a racial discrimination lawsuit alleging that their 94% minority high school was unfairly singled out for closure due to a declining enrollment problem in Phoenix. Mr. Flores informed me that in his review of the literature, he had come across one of my publications on minority school closures, the Santa Barbara, California, *Angeles* case, in which I served as an expert witness for a group of minority plaintiffs who brought a suit similar to the one in Phoenix. After I asked Mr. Flores a few questions, he eventually asked what I had anticipated - "Would you be interested in getting involved in the case?" Because of my scholarly interests in school closures, particularly those cases involving alleged racial discrimination, I requested that he send me some pertinent materials so I could become familiar with the case. Well, Mr. Flores didn't procrastinate. Two days later -- via *Express Mail* -- I received three grocery size boxes, weighing 70 pounds, crammed full of material!

It was fascinating reading. The more I read, the more I felt the plaintiffs had a strong case. Little did I know that two months later my testimony in the case would prove to be very influential in a Federal Court decision in favor of the plaintiffs. I'll never forget the "summer of '82". The intellectual challenge and growth I experienced were unparalleled.

In this lengthy document, I have attempted to share with the reader the type of thinking that went on in my mind and how such thoughts became converted to my actual testimony in court. It is not a stream of consciousness approach, but a methodical, detailed presentation as to how I conceptualized the issues of discriminatory intent and impact against the Chicano and Black students. You will probably notice that my logic encompasses a type of social scientific "detective" approach (e.g., questioning the evidential bases; linking variables together; generating alternative hypotheses). This approach can be seen in the first major section ("The Issue of Intent:..."). The second major section ("The Issue of Impact:...") consists largely of my thoughts on theory building concerning how minority students may be negatively affected by closures. To some readers, parts of this section (e.g., the literature reviews; conceptualization of my major concepts) may appear to be digressions. They are not meant to be. Rather, the purpose of these parts is to share with the reader the universe of social science knowledge from which I drew to develop my theorizing and my eventual, compressed testimony in court.

As the reader will likely see, this is a lengthy and detailed document. I have attempted to make that long walk through the forest with you more comfortable by using the first person pronoun often and by having several key transition points and numerous topical headings. I hope you find this journey as interesting as I have found it.

R.R.V.

# ABSTRACT

The interaction of inflation, fiscal cutbacks, and declining enrollments in the political economy of education has closed a large number of public schools over the last ten years throughout the nation. Because of the alleged huge cost savings brought about by school closures, school boards have been implementing this belt-tightening strategy with increasing frequency. The issue, however, is not that some schools will be earmarked for closure, but rather which school(s) in a community will be closed. When one segment of the community feels it is being forced to carry an exclusive or disproportionate burden resulting from closures, then litigation is likely to occur. This was the case in Phoenix, Arizona.

In 1981 and 1982, the Phoenix Union High School District School Board decided to close 3 of its 11 comprehensive high schools. All three targeted schools had very high enrollments of minority students. None of the District's six Anglo schools in the suburbs were selected for closure. As a result of the three closures, a 30 square mile area of the inner city contained no high school to serve the predominantly minority population. Subsequently, Black and Chicano parents and students from one of the targeted schools (Phoenix Union, a 94% inner-city minority school) sued the District charging racial discrimination.

This monograph covers the background, the progress, and outcome of this lawsuit (Castro case). The author, who served as the expert witness for the plaintiffs, attempts to show how social science research can be brought to bear on a case like this. The conceptual framework presented

concentrates on the issues of discriminatory intent and impact. Regarding intent, the author presents a detailed analysis showing how the criteria for conduciveness to school closure used by the District were inherently biased against minority schools. With respect to potential impact on the displaced minority students, the author draws from several theoretical and empirical bases in the psychological and educational literature in order to shed light on the issue of alleged adverse impact. His testimony was that the closure would generally create serious psychological and educational consequences for the students. These effects are discussed in the context of policy implications for equal educational opportunity.

After a lengthy hearing for injunctive relief, a Federal Court judge ruled in favor of the plaintiffs. The Court ordered the enjoinment of the sale or lease of Phoenix Union High School, and also ordered its reopening. However, a posthearing proposal offered by the District was accepted by the court. The proposal called for North High, a previously closed inner-city school, to be reopened in order to accommodate minority students from the Phoenix Union High School attendance area. Phoenix Union was in turn closed.

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# A Conceptual Framework for Understanding the Discriminatory Aspects of School Closures on Minority Students: Policy Implications for Equal Educational Opportunity

## INTRODUCTION

The purpose of this paper is to present an educational analysis of a major school closure lawsuit filed by ethnic minority plaintiffs in Phoenix, Arizona in mid-1982. A group of Black and Chicano parents and their children in high school sued the Phoenix Union High School District #210, charging racial discrimination in the closure of a high school with 94% minority enrollment; the Federal Court decision was in favor of the plaintiffs. Certainly, the judge's ruling for injunctive relief was a monumental victory for the inner-city, working-class, minority community of Phoenix. However, the plaintiffs' legal victory goes much further. First, the decision in the Castro et al. v. Phoenix Union High School District #210 et al.[1] preliminary injunction hearing will likely make case law regarding future litigation in minority school closure lawsuits. This is so, because up to now, previous school closure litigation (e.g. Angeles et al. v. Santa Barbara School District et al.)[2] has not had a solid "school closure" case law base from which to argue. Past litigation has been primarily based on law from desegregation cases (Ah Tye, 1982). Second, the decision in the Castro case clearly signals that a social science testimonial base has been established as a mechanism to assist future judicial decision making in school closure litigation. The major purpose of the present study is to discuss the social science theoretical and empirical bases that helped to shape the judicial decision in the Castro case. However, it is useful to sketch the pertinent background information first.

## School Closures in General

Beginning approximately in the mid-1970's and continuing through the present, a large number of public schools have been closed throughout the nation. In the last five years, the rate of closures has greatly escalated. Three major factors have contributed to the closing of schools: inflation, fiscal cutbacks, and declining enrollments.

Regarding inflation, Bailey, Fritschen, and All (1978) report that in 43 states it cost 50% more money in 1978 than in 1971 to operate elementary and secondary schools. Bailey et al. also note that between 1971 and 1976 the national kindergarten to twelfth grade enrollment declined by 2.3%, but the cost of educating students increased by 56%.

Massive monetary cutbacks have also rocked school districts nationwide. For example, the passage of Proposition 13 in 1978 in California, which sliced property taxes by 56%, and the passage of Proposition 4 in 1979, which put a lid on state spending, have created a financial crisis for a large number of the state's 1,042 school districts. After four years of providing annual "bailout" money of $4.6 to $6 billion to local school districts, the state reservoir was dry in 1982 owing to drastic budget cuts. The full effect of Proposition 13 was felt during the 1982-83 and 1983-84 school years as the 1978 "tax revolt" mandate finally caught up with the schools.[3] The fiscal cutbacks and shortfalls are also beginning to affect a large number of other states which followed in California's tax limitation footsteps.

The third variable, declining enrollments, has also had a significant fiscal impact. Because school district income is determined by the size of enrollment, declines in the student population translate into fiscal reductions. Even a small decline of several hundred students in one year means financial losses of a quarter to one-half million dollars. Over a 5 to 10 year span, enrollment declines of 20-30% in large school districts can mean millions of dollars in fiscal reductions. The major factor contributing to the decline in student enrollments has been the nationwide decrease in the number of live births since the late 1950's.[4] Although the number of kindergarten through grade four children will begin to increase in 1984, peak in 1992, and stabilize through the year 2000, the prognosis for older students is less promising. The number of students in grades 5-8 will continue to decline through 1988, after which time enrollment will gradually increase through the year 2000. The number of high school age students (grades 9-12), however, is expected to decrease further until 1992, at which time enrollment is projected to shift upward.[5]

In addition to the primary factor of the decreased birth rate contributing to declining enrollments in our urban centers, there are a number of secondary causes. These include long established patterns of whites migrating out of the inner cities to suburbia (Orfield, 1976), white flight as related to the proportion of black enrollment in a district (Pettigrew, 1981), the increased enrollment of white students in private schools (Farley, 1978; cited in Pettigrew, 1981), and the "hastening up" effect of white flight brought about by desegregation (Farley, 1978; cited in Pettigrew, 1981). In summary, whether the nation's dramatic declines in public school enrollments are related to a decrease in live births or demographic, housing, or desegregation factors, such declining enrollments are expected to be with us for some time, especially at the secondary level.

What fiscal belt-tightening strategies have school districts used to solve or ameliorate the heavy financial losses brought about by declining enrollments? The measures have varied according to the severity of the problems and the politics of the local school district, but generally one or more of the following methods have been used: teacher and staff layoffs, hiring freezes, reassignment of administrators to teaching positions, freezing of pay raises, legislative relief, tax overrides, "pay-to-play" policies (e.g., a requirement that students pay fees in order to participate in athletics), elimination of free bus transportation for students, reduction or elimination of special school programs, and the closing of schools and the subsequent sale or rental of land and facilities from such closures. It is this last option -- closures of underutilized schools -- that has been implemented with a growing frequency. Most school boards would contend that the "management" and "operational" savings from such closures can assist them the most in covering short-term monetary shortfalls. In addition, schools proposed for closure in "downtown" areas often reap huge rental, lease, or sale income because of their prime commercial value. Furthermore, some city councils and school districts are working cooperatively and expeditiously to rezone closed school sites for residential development. In such cases, school property sales can result in millions of dollars more than school districts expect.[6]

In conclusion, the ever increasing rate of closures of schools due to declining enrollments, inflation, and fiscal cutbacks is a reality. The issue, however, is not that some schools will close, but rather which school(s) in a community will be proposed for closure (Valencia, 1980). It is this issue that is most likely to promote litigation, particularly when one segment of the community feels it is being forced to carry an exclusive or disproportionate burden brought about by school closures. This was the case in Phoenix, Arizona.

## The City of Phoenix

During the past decade, Arizona was the second fastest growing state in the nation. Phoenix, the capital, also exploded in its population. In 1950, with a census count barely over 100,000, Phoenix ranked 98th nationally in U.S. cities by population. In 1960 and 1970, Phoenix ranked 29th and 20th, respectively. Based on the 1980 census data, Phoenix ranked 9th in the nation with a population of 789,704 people.[7] Phoenix's metropolitan area in 1980 had a population of about 1,500,000 people.[8]

A significant factor in Phoenix's dramatic growth over the last 30 years has been its ability to expand.[9] In 1950, Phoenix was a small, desert community encompassing 17 square miles. As of 1980, the city had expanded to include over 300 square miles.[10] The tremendous growth of Phoenix over the last three decades has placed this city in the select group of very large urban centers, and more growth is imminent.[11] Most of the population increase in metropolitan Phoenix has come from in-migration.[12] This large influx has typically been a population of white, educated, middle-class people,[13] generally drawn to employment in electronic equipment manufacturing, aircraft parts production, commerce, banking, and education.[14] Given the spectacular growth of Phoenix, why has there been a problem with declining school enrollments? This subject is covered next.

## Declining Enrollment and Fiscal Problems in PUHSD

The school district organizational structure in metropolitan Phoenix has been characterized as one of the most complex in the nation.[15] Thirty-nine elementary, 10 unified, and 6 high school districts serve over a quarter million students.[16] Phoenix Union High School District #210 (hereafter referred to as PUHSD or District), the subject of this monograph, is one of the six high school districts in metropolitan Phoenix. The PUHSD covers 220 square miles of the city of Phoenix. Thirteen elementary "feeder" districts provide students to the PUHSD. The boundaries of the feeder districts are basically co-terminus with the boundary of the PUHSD.

In the 1978-79 school year, the 55 school districts had a total enrollment of 271,012 students.[17] Compared to the national pattern of declining school enrollments, education was a growth industry in metropolitan Phoenix in the 1970s.[18] Although there were increases and decreases among the 55 school districts, overall the total enrollment increased by 34,978 students from 1970-71 to 1978-79 for a 15% jump.[19] The sharpest declines in the metropolitan area were seen in the Phoenix central-city area while the greatest enrollment increases were in the outlying suburbs and in the northern area of the city of Phoenix. The central-city area -- which serves substantial minority populations -- was losing students to suburban and North Phoenix areas, which serve predominantly Anglo students.[10] In fact, those 10 districts which showed the greatest gains from 1970-78 were located in outlying areas while the 10 districts with the largest student losses were in the central-city area.[21]

Two major hypotheses have been advanced to explain the shrinking enrollments in the central city. One hypothesis deals with the lack of boundary congruency between the city of Phoenix and the PUHSD. Through annexation, the city has increased its size to about 300 square miles. At the same time, the size of PUHSD (which encompasses 220 square miles) has remained static for a number of years. The disparity between the large growth rate of the city of Phoenix and the declining enrollment in the PUHSD (and its feeder districts) is partially explained by the absence of co-terminous boundaries between the city and the district.[22]

A second hypothesis to explain the declining enrollment problem in the city of Phoenix focuses on residential development and housing patterns. Although there is no formal desegregation plan operative in Phoenix to explain white flight, white suburbanization has occurred nonetheless.[23] The preferences of Anglo newcomers to live in suburban areas partly because the quality of the neighborhood school was perceived as important, the steering of Anglo home buyers by real estate agents to noncentral-city areas, and the negative impact of Phoenix's program of subsidized housing on school desegregation have all contributed to the sharp differences in enrollment fluctuations in the 55 school districts of the metropolitan area.[24] Other development conditions (e.g., industrial development crowding out residents, right-of-way for a major freeway) have also helped to reduce the school age population of the PUHSD.[25]

The enrollment plight of the PUHSD has indeed been severe. In 1970-71 the District's enrollment was 28,481 students. A decade later, in 1980-81, the enrollment had plummeted to 21,376 students, a sharp decline of 25%.[26] It was projected in late 1981 that by 1983-84, the PUHSD would lose another 2,000 students,[27] bringing the total enrollment under 20,000 students for the first time in 20 years.[28] Based on a rough average of a $2000 per pupil allocation for the 1970-80 period, the decline of 7,105 students represented a staggering fiscal loss over the last decade of over $14 million of incoming funds to PUHSD. Thus, the District faced a $6.5 million deficit for the 1982-83 school year.[29] Confronted with this severe financial crisis, the PUHSD administration and School Board struck out in early 1979 to solve the budget crunch. Particular emphasis was placed on the study of school closures.

## School Closure Criteria and School Closures in the PUHSD

In the early part of 1979, rumors surfaced in the PUHSD that some school closures would occur during the upcoming 1979-80 school year.[30] In an attempt to quell the rumors, the PUHSD Board of Education (hereafter referred to as the Board), on March 15, 1979, passed a resolution stating that no high schools would be closed in 1979-80.[31] Also at that meeting the Board asked the administration to conduct an indepth study on closure criteria in the event school closures would need to occur at the beginning of the 1980-81 academic year.[32] On October 4, 1979, the Board approved six general criteria to be used in the event of school closures.[33] The six criteria, with their respective weights and 21 subparts ("factors"), were as follows:

A. Provision of Equal Educational Opportunity (30% weight value)
   1. Comparison of current course offerings
   2. Assessment of student achievement levels
   3. Assessment of special education (i.e., learning disability and emotionally handicapped, and educationally mentally handicapped) needs
   4. Assessment of need for gifted programs
   5. Length of service or experience of teachers
   6. Measure of numbers of teachers by subject area
   7. Campus adequacy to serve handicapped students
   8. Adequacy of the school to serve educational needs

B. Membership Decline (15% weight value)
   1. Decline in membership during past 10 years
   2. Rate of decline in membership since 1969/70

C. Population Balances (15% weight value)
   1. Ethnic and racial balance in certificated staffing
   2. Ethnic and racial balance in student bodies

D. Operational Cost Analysis (25% weight value)
   1. Assessment of utility usage
   2. Comparison of operational costs
   3. Cost savings in the M & O budget resulting from school closure

E. Facility Flexibility (10% weight value)
   1. Age of original buildings
   2. Assessment of building maintenance needs
   3. Campus capital improvement needs
   4. Educational capacity - utilization
   5. Potential alternative uses

F. Geographical Constraints (5% weight value)
   1. Assessment of geographical and demographic factors.[34]

Subsequently, on November 1, 1979, a 100-page report entitled an Analysis of Criteria for School Closure (hereafter referred to as Criteria Report) was presented to the Board.[35] The report contained a statement of purpose, a list of criteria and respective weights and factors, a scoring procedure, an assessment of the criteria on a school-by-school basis, the final rating of the schools, and accompanying appendices.

With respect to how the various criteria and factors were selected and assessed, the Criteria Report stated:

> As is often the case in any such analysis, the criteria and the elements within each criteria, and most particularly the kind of data--the sub-categories if you will--used will be subject to challenge and criticism. And perhaps they should be. There are certainly other measurements which could be used and other information which could be provided.
>
> The administrative staff, however, used the following constraints. First, lengthy as the report is, an attempt was made to keep it within reason as to size. Second, the data used should be reasonably available and easily understood. Third, with very few exceptions, the information shown is factual and objective. For one or two of the factors, some subjective judgement had to be used. Finally, this report is to provide information to assist the Board in reaching a decision, not to make the decision for the Board.[36]

Regarding the actual ratings of the criteria and factors on a school-by-school basis, the Criteria Report pointed out:

> Data are being collected for each component of each criteria and a rating scale of 1 to 5 will be utilized in assigning values. The scale goes from a 5 for "least conducive to closure" to a 1 for "most conducive". Each school will then be rated from 1 to 5 for each factor.
>
> A composite or average score will then be computed for each of the 6 criteria for each school. The composite for each school will be weighted by the value of each criterion utilizing the weights presented earlier so that a ranking of the schools can be made.
>
> It is obvious that choices had to be made as to what the criteria should be, how they would be weighted, what factors or elements should be considered within each criteria, and how the rating scale would be implemented. A concerted effort was made to restrain subjective value judgements so that this part of the school closure(s) assessment would be as objective as possible.

> There are other elements which the Board will want to consider in school closure. The purpose of this report is primarily to provide valid and usable information to the Board to assist it in the final decision.[37]

Based on the school-by-school ratings in the Criteria Report, the 11 high schools in the PUHSD were rated for closure according to the total number of criteria points. The final rankings for closure are presented in Table 1. The rankings shown in Table 1 revealed that "minority" schools surfaced as most conducive for closure. In contrast, the "Anglo" schools consistently were ranked toward the bottom, meaning they were judged to be least conducive for closure.[38] The author subjected this eye-ball observation to a statistical analysis (Spearman rank order correlation) and found a highly significant relation between rankings of total criteria scores and ethnic enrollment percentages ($\underline{p}$ = .90, significant $< .01$). That is, the higher the minority enrollment of a school, the higher the probability that that school was judged to be most conducive to closure. The implications of this strong relation will be discussed later.

On November 15, 1979 the Superintendent of the PUHSD recommended the closures of Union, North, and West. However, partially owing to public protest, the Board tabled the recommendation.[39] Because of continued public opposition to the closures, a tax override, and a partial change in the Board's composition, no schools were closed during the remainder of the 1979-80 school year.[40] In the 1980-81 school year, the new Board--in its desire to solve PUHSD's budget problems without closing schools--axed nearly 3 million dollars from its budget in an attempt to keep the District afloat.[41] Nevertheless, fiscal problems still

Table 1

Rank Order Comparison Between Total Criteria Score and Percentage of Minority Student Body Enrollment

| | Total Criteria Score | | Minority Student Enrollment | |
|---|---|---|---|---|
| School | Pts.[a] | Rank | % | Rank |
| Union | 38 | 1 | 94.2 | 1 |
| South | 52 | 3 | 87.7 | 2 |
| Hayden | 58 | 4 | 75.0 | 3 |
| North | 49 | 2 | 64.4 | 4 |
| East | 67 | 6.5 | 56.7 | 5 |
| West | 65 | 5 | 25.7 | 6 |
| Maryvale | 74 | 9 | 19.5 | 7 |
| Alhambra | 67 | 6.5 | 13.2 | 8 |
| Central | 69 | 8 | 9.4 | 9 |
| Camelback | 75 | 10 | 7.8 | 10 |
| Browne[b] | -- | -- | 18.0 | -- |

[a] Total maximum was 105 points (21 factors x 5 points). The schools are ranked from least points obtained (Union) to most points obtained (Camelback).

[b] Browne, built in 1972, was not given a score in the *Criteria Report* for the criterion of "membership decline." Therefore, this school was not included for analysis in Table 1.

*p* (rank order correlation coefficient) = .90 (significant < .01).

Source: Adapted from *Analysis of Criteria for School Closure: A Report to the Board of Education*. Phoenix Union High School District, November 1, 1979, pp. 48-53.

abounded. The Board had two options: slice into the budget even further or close schools. The Board chose the latter.[42]

On March 10, 1981, the Board decided by a 3-2 vote to close North, an inner-city school with a substantial minority enrollment.[43] Furthermore, West High School, rapidly becoming a minority school, was selected for closure and conversion to a vocational facility.[44] On November 19, 1981, by a 3-2 vote, Phoenix Union, the school with the greatest minority enrollment (nearly 100%), was also marked for closure.[45] Finally, on January 7, 1982, East High School, an inner-city school with a two-thirds minority enrollment, was selected for closure by a divided Board.[46] In summary,

> ...The end result was the disemboweling of the inner city by removing therefrom all the secondary educational facilities which were easily accessible to minorities... there is no high school within the former attendance zones... This area comprises 30 square miles and is an area where minorities predominate...[47]

As a result of the above closures, minority parents and students from Phoenix Union (94% minority) filed a federal lawsuit in March of 1982, claiming racial discrimination.

## Charges of the Plaintiffs in the Castro Case and Case Law

The plaintiffs' complaint had two components. First, it was alleged that plaintiffs' rights were violated under the provisions of equal protection and due process pursuant to the United States and Arizona Constitutions. Second, the plaintiffs also claimed their rights were being violated pursuant to Title VI of the Civil Rights Act of 1964 (42 U.S.C. Section 2000 et seq.). Based on these two legal premises, the plaintiffs charged that the closure of Phoenix Union was intentionally discriminatory and undeniably discriminatory in impact, denying the rights of the students to an equal educational opportunity.

With respect to the claims of equal protection and due process violations, the thrust of this charge was that school closures are indeed burdensome, and that the Board's closure of Phoenix Union (and the closures of other minority schools) meant the exclusive burden was being placed on minorities, i.e., that Anglo students were being exempted from such burdens. Case law such as Cisneros v. Corpus Christi Independent School District [467 F. 2d 142, 153 (5th Circuit, 1972)] and United States v. Texas Education Agency [467, F. 2d 848, 855 (5th Circuit, 1972)], in which the Courts ruled that the imposition of burdens on minority groups constitutes invidious discrimination and must be avoided, was presented and argued by counsel for the plaintiffs.

Concerning the Title VI aspect, the argument here was that any program or activity receiving federal assistance cannot discriminate on the basis of race, color, or national origin (42 U.S.C. Section 2000d, 1976). Furthermore, counsel for the plaintiffs argued:

> In Lau v. Nichols, the Supreme Court held that a prima facie case of discrimination in violation of Title VI could rest solely on disproportionate effect as opposed to discriminatory intent.... The Supreme Court...noted that there was no evidence that defendants had intended to discriminate, and then expressly stated that plaintiffs were not required to prove intentional discrimination in order to prevail under Title VI. Several lower courts since Lau, have held that Title VI incorporates an effects standard[48]... In sum, Lau is the controlling law in Title VI actions alleging discrimination, and plaintiffs need only to show effect or impact as opposed to intent. Although the foregoing law indicates plaintiffs need not show intent to prevail on their complaint, it is submitted that the natural, reasonable, and foreseeable results of the defendants' actions in this case were and are discriminatory.[49]

On the issue of evidence of intent, plaintiffs' counsel noted:

> ...sufficient evidence will be presented during the hearing as to defendant's discriminatory intent. Evidence to be presented

> will include defendant's statements to show they had full knowledge of the discriminatory consequences of their decision; defendant's use of racially biased criteria in the determination of what schools would be closed; defendant's total disregard of the Office of Civil Rights admonition regarding adverse racial impact for closing inner city schools; and defendant's total disregard of their counsel's advice against the closing of two inner city schools.[50]

In conclusion, the legal strategy of the plaintiffs was twofold: to produce evidence of racially motivated intent and evidence of adverse racial impact. The remainder of this monograph attempts to explain how social science research contributed to a clearer understanding of the claims of discriminatory intent and impact, and how such an understanding raises implications for equal educational opportunity.

## THE ISSUE OF INTENT:

## RACIAL DISCRIMINATION IN THE DECISION-MAKING PROCESS

As described in the previous section, the counsel for the plaintiffs presented evidence of racially motivated intent using several evidential bases. One in particular, the criteria used for school closures, lends itself appropriately to the scrutiny of social science research. After a careful and thorough examination of the Criteria Report, this author (who testified as the expert witness for the plaintiffs) thought that there was substantial evidence that portions of the criteria used for the school closures in the PUHSD were inherently biased against the District's minority schools and inherently biased toward the Anglo schools.[51] That is, I had reasons to believe there was evidence that the manner in which certain criteria were selected and applied to the schools was such that minority schools would inevitably surface as most conducive for closure. Furthermore, there was evidence that many of the "factors" included within particular criteria were shaky because of faulty or unsupportable assumptions and/or lack of an empirical basis in the context of social science research. Finally, there was evidence, from a measurement standpoint, that the scoring procedure involved arbitrary and capricious scaling techniques, assignment of values, and interval cut-off points. The purpose of this section is to discuss some of these problems with respect to one criterion, "Equal Educational Opportunity." As the expert witness for the plaintiffs, I was asked by counsel to examine this criterion for its validity as a measure of equal educational opportunity. This was to be a highly critical aspect of the litigation since this criterion carried the most weight (30%) compared to the other five closure criteria.

Equal Educational Opportunity. The assumption behind the inclusion of this criterion for closure conduciveness was that schools in the District vary in their delivery of equal educational opportunities to the students. The District's logic was that schools which provided the least equal educational opportunities should be judged most conducive for closure. This appears to be a sound assumption. However, two key questions need to be addressed before the components of the equal educational opportunity criterion are deemed to be appropriate. First, do the factors of this criterion have sound "construct validity"? That is, are the factors "measuring or assessing what they are supposed to measure" (equal educational opportunity)? Second, do the factors and the criteria have sound "predictive validity"? That is, can it be stated that the factors and criterion are systematically error (or bias) free in predicting which schools will be judged most conducive for closure? These two conditions, loosely drawn from test and measurement theory, served as guidelines in my analysis of the criterion under scrutiny and my subsequent testimony regarding its inherent bias.

## Factor One: Comparison of Current Course Offerings

The Criteria Report gave the following rationale for the inclusion of this factor as an index of equal educational opportunity:

> One of the primary measures of equality of educational opportunity is the number of courses offered on each campus, as well as the nature of such offerings.[52]

The District's curricular offerings consist of an "Alpha", "Beta", "Gamma", sequence. Alpha courses are essentially, but not exclusively, the core courses of the curriculum; they are offered at each high school in the District regardless of the number of students registered. The District's standard in 1979 was 63 Alpha course offerings. That is, the District hoped to have 63 Alpha courses offered at each campus. Alpha courses are typically remedial or basic in nature. The second strand of courses, Gamma, are offered only if student demand (usually 20 students) is present. Such courses are usually of the advanced/college preparatory type but in some instances are basic. Beta course offerings are also dependent on student demand. In addition, Beta courses are offered only if staff and resources are available. These courses are typically advanced/college preparatory in nature.

The Criteria Report used the number of Alpha courses on each of the 11 campuses as the appropriate measure of equal educational opportunity. If the Alpha series truly reflected the District's core curriculum and if Alpha courses were offered regardless of the student registration numbers, then the number of Alpha courses appears to be a sound measure of equal educational opportunity. However, two questions arise: (1) "How does one operationalize the dependent or criterion variable of equal educational opportunity?" and (2) "How well does the independent variable (number of Alpha course offerings) predict the dependent variable?" Regarding question one, I selected academic achievement levels as the index of equal educational opportunity. This was based on the assumption that academic achievement levels at particular schools reflect the quantity and quality of learning opportunities that either promote or thwart equal education efforts (e.g., U.S. Commission on Civil Rights, 1971b). For question two, I examined the statistical relation between the number of Alpha courses and academic achievement to see if a significant relation existed. Table 2 shows this analysis. The results of the rank order correlation analysis revealed a coefficient of .51, indicating a nonsignificant relation at the .05 level of confidence. Therefore, at least in a statistical sense, the assumed

Table 2

Rank Order Comparison Between Alpha Courses and Academic Achievement

| | Number of Alpha Courses | | Academic Achievement[a] |
|---|---|---|---|
| School | No. | Rank | Rank |
| Camelback | 58 | 1 | 2 |
| Alhambra | 55 | 2 | 3 |
| Hayden | 54 | 4 | 9 |
| Maryvale | 54 | 4 | 4 |
| West | 54 | 4 | 5 |
| South | 53 | 6 | 10 |
| East | 52 | 7 | 7 |
| Central | 51 | 8 | 1 |
| Browne | 50 | 9.5 | 6 |
| North | 50 | 9.5 | 8 |
| Union | 41 | 11 | 11 |

[a] Based on Fall, 1978 mean stanines of the Comprehensive Tests of Basic Skills for grades 9-12.

$p = .51$ (nonsignificant)

Source: Alpha rank data and achievement rank data are from the Criteria Report, pp. 10 and 12, respectively, p. 48.

relation between the number of Alpha course offerings and equal educational opportunity (as measured by academic achievement) appeared to be unsupported.

As noted previously, the Criteria Report also stated that in addition to the number of courses offered, the "nature of such offerings" was a primary measure of equal educational opportunity. Nowhere in the Criteria Report was the nature of the Alpha courses analyzed in the context of equal educational opportunity. However, I presented such analysis in my testimony. Table 3 presents the data. The analysis contained in Table 3 compares the number of Alpha courses on a school-by-school basis according to the type of Alpha course (e.g., art, science). For example, in the case of art, the District offered five kinds of Alpha courses. Alhambra offered all five types of these Alpha art courses while Phoenix Union offered only one kind. For the 11 schools the average number of art offerings was 4.09.

I addressed the question of the nature of such Alpha offerings by categorizing the types into two groups: (a) courses that could be deemed "core" or "essential" to a curriculum (e.g., mathematics), and (b) courses that might be judged less essential, perhaps best called "peripheral" to the curriculum of a comprehensive high school (e.g., home economics). Once this categorization was done, then variability among the schools regarding core and peripheral course offerings could be compared and conclusions drawn about equal educational opportunity. Table 4 contains data that shed light on this issue. The data show that for the six types of core Alpha courses Phoenix Union was at or above the District average on three types (reading, science, and social studies)

Table 3

Types and Numbers of Alpha Course Offerings in PUHSD -- 1979-80

| | Number of Alpha Courses | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Department | District | A | B | Ce | C | E | H | M | N | PU | S | W | District $\bar{x}$ |
| Art | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 1 | 4 | 5 | 4.09 |
| Business Education | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 7 | 6 | 7 | 6.55 |
| English | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 3 | 2 | 2.00 |
| Communication Arts | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 2 | 2 | 3 | 3.46 |
| Foreign Language | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 3.73 |
| Health Education | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Home Economics | 6 | 5 | 5 | 4 | 4 | 5 | 6 | 4 | 5 | 3 | 5 | 6 | 4.73 |
| Industrial Arts | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 1 | 5 | 5 | 4.36 |
| Junior ROTC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Mathematics | 7 | 7 | 5 | 7 | 6 | 5 | 6 | 7 | 6 | 5 | 6 | 5 | 5.92 |
| Music | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1.36 |
| Physical Education | 8 | 6 | 4 | 8 | 4 | 5 | 5 | 6 | 4 | 5 | 5 | 6 | 5.27 |
| Reading | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1.73 |
| Science | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3.82 |
| Social Studies | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4.00 |
| Student Opportunities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Totals | 63 | 55 | 50 | 58 | 51 | 52 | 54 | 54 | 50 | 41 | 53 | 54 | 52.00 |

A = Alhambra
B = Browne
Ce = Central
C = Camelback
E = East
H = Hayden
M = Maryvale
N = North
PU = Phoenix Union
S = South
W = West

Source: Adapted from the _Criteria Report_, p. 64

Table 4

Comparison of Core and Peripheral Alpha Courses Offered at Phoenix Union High School

| Core Course | Number Offered at Phoenix Union | District Average |
|---|---|---|
| English | 1 | 2.00 |
| Foreign Language | 3 | 3.73 |
| Mathematics | 5 | 5.91 |
| Reading | 2 | 1.73 |
| Science | 4 | 3.82 |
| Social Studies | 4 | 4.00 |
| **Peripheral Course** | **Number Offered at Phoenix Union** | **District Average** |
| Art | 1 | 4.09 |
| Business Education | 7 | 6.55 |
| Communication Arts | 2 | 3.46 |
| Health Education | 1 | 1.00 |
| Home Economics | 3 | 4.73 |
| Industrial Arts | 1 | 4.36 |
| Music | 2 | 1.36 |
| Physical Education | 5 | 5.27 |

Source: Adapted from the Criteria Report, p. 64.

and only slightly below the District average on the other three types (English, foreign language, and mathematics). Regarding the eight peripheral types, Phoenix Union was at or above the District average on three course types (business education, health education, and music) and slightly or considerably below on five other types (art, communication arts, home economics, industrial arts, and physical education).

Based on the preceding analysis, it could be concluded that Phoenix Union's District low of 41 Alpha course offerings was largely accounted for by a shortage of courses in the peripheral areas. Conversely, the distribution of those 41 offerings was fairly close to the District average in the core areas.

Therefore, given the two analyses presented (observed correlation between the number of Alpha offerings and academic achievement and the nature of such offerings), I testified that factor one ("comparison of current course offerings") of the equal educational opportunity criterion lacked validity as an index of closure conduciveness.

The final school closure conduciveness rating for factor one on a school-by-school basis is shown in Table 5. It is clear from the data in Table 5 that the District's minority schools tended to be distributed in the lower half of the rankings, meaning they were rated to be more conducive for closure. Eventually, Phoenix Union, North, East (and West)--the first three being minority schools and West moving rapidly toward minority status--were closed.

## Factor Two: Assessment of Student Achievement Levels

Although the rationale for this factor was not explicitly stated in the Criteria Report, the defendants did testify at the Castro hearing that schools with lower levels of academic achievement were not providing equal educational opportunity to the same degree as schools with higher levels of achievement.

The inclusion of factor two is one of the best examples of a decision-making index that was biased against minority schools and biased in favor of Anglo schools. This contention is based on three interrelated observations from the minority-related educational literature. Proportionately speaking, minority students, compared to Anglo

Table 5

School Closure Conduciveness Ratings for Factor One: Comparison of Current Course Offerings

| | | Closure Conduciveness Score for Each School | | |
|---|---|---|---|---|
| Number of Alpha Course Offerings | Closure Conduciveness Score[a] | School | Number of Courses | Score |
| Over 57 courses | 5 | Camelback | 58 | 5 |
| 54 to 57, inclusive | 4 | Alhambra | 55 | 4 |
| 50 to 53, inclusive | 3 | *Hayden | 54 | 4 |
| 46 to 49, inclusive | 2 | Maryvale | 54 | 4 |
| less than 46 courses | 1 | West | 54 | 4 |
| | | *South | 53 | 3 |
| | | *East | 52 | 3 |
| | | Central | 51 | 3 |
| | | Browne | 50 | 2 |
| | | *North | 50 | 2 |
| | | *Union | 41 | 1 |

[a] 5 was considered "least conduciveness for closure" and 1 was "most conduciveness for closure."

* Indicates a minority school (greater than 50% minority enrollment); all other schools are Anglo schools.

Source: Adapted from the *Criteria Report*, pp. 10 and 37.

students: (a) tend to be from lower socioeconomic status background, (b) tend to enroll in high density minority schools, and (c) tend to perform lower on standardized achievement measures.[53] Therefore, by including factor two, one could unequivocally predict *a priori* that minority schools would be identified as most conducive for closure. Furthermore, given the pervasive finding in the literature that socioeconomic status is positively correlated with academic achievement, it could be stated in advance of any analysis that the higher the minority enrollment of a high school in the PUHSD, the lower the achievement levels would be.

During cross-examination at the hearing, a witness for the defendants denied that school ethnic enrollment levels were excellent predictors of school achievement levels. However, upon inspecting the data in Table 6 that I prepared, the witness changed her position. The statistical analysis presented in Table 6 showed a very strong relation between minority enrollment and achievement. In fact, for the first five schools (the District's minority schools) a perfect rank order relation

Table 6

Rank Order Comparison Between
Percentage of Minority Student Body
Enrollment and Academic Achievement

| | Minority Student Enrollment | | CTBS Achievement[a] |
|---|---|---|---|
| School | % | Rank | Rank (lowest) |
| Union | 94.2 | 1 | 1 |
| South | 87.7 | 2 | 2 |
| Hayden | 75.0 | 3 | 3 |
| North | 64.4 | 4 | 4 |
| East | 56.7 | 5 | 5 |
| West | 25.7 | 6 | 7 |
| Maryvale | 19.5 | 7 | 8 |
| Browne | 18.0 | 8 | 6 |
| Alhambra | 13.2 | 9 | 9 |
| Central | 9.4 | 10 | 11 |
| Camelback | 7.8 | 11 | 10 |

[a] Based on Fall, 1978 mean stanines of the Comprehensive Tests of Basic Skills for grades 9-12.

$\underline{p} = .96$ (significant < .01)

Source: Achievement rank data are from the Criteria Report, p. 12.

was noted.

Table 7 contains the final school closure conduciveness rating for factor two. Again, the results shown in Table 7 presented a clear pattern: minority schools were identified as being the most conducive for closure, with a corresponding relation between minority enrollment and closure conduciveness. The school with the highest minority enrollment--Phoenix Union--was ranked number one for closure.

Table 7

School Closure Conduciveness Rating for Factor Two: Assessment of Student Achievement Levels

| | | Closure Conduciveness Score for Each School | | |
|---|---|---|---|---|
| Mean Stanine Ranking | Closure Conduciveness Score | School | Mean Stanine Ranking | Score |
| 1 or 2 | 5 | Central | 1 | 5 |
| 3 or 4 | 4 | Camelback | 2 | 5 |
| 5 or 6 | 3 | Alhambra | 3 | 4 |
| 7 or 8 | 2 | Maryvale | 4 | 4 |
| 9,10, or 11 | 1 | West | 5 | 3 |
| | | Browne | 6 | 3 |
| | | *East | 7 | 2 |
| | | *North | 8 | 2 |
| | | *Hayden | 9 | 1 |
| | | *South | 10 | 1 |
| | | *Union | 11 | 1 |

* Indicates a minority school; all other schools are Anglo schools.

Source: Adapted from the Criteria Report, pp. 12 and 37.

## Factors Three and Four: Assessment of Special Education Needs and Assessment of Need for Gifted Programs

Because of their similarity, factors three and four are combined here for analysis.

Factor three, "assessment of special education needs," involved the District's special education programs for students with Learning Disabilities and/or Emotionally Handicapped (LD/EH) and students identified as Educationally Mentally Handicapped (EMH). The assumption in the Criteria Report regarding the inclusion of these programs as decision-making indices was:

> ...another measure of equal educational opportunity for all district students is the membership in and location of these students...the percentage of the student membership on each campus...includes the students in these two areas of exceptionality. This is one way to identify the need for and assessment of the impact of these programs on each campus.[54]

Regarding closure conduciveness, the Criteria Report contended that the higher the percentage of LD/EH and EMH students in a school's student body, the more conducive a school was for closure. However, nowhere in the Criteria Report can be found the educational rationale and empirical basis for the inclusion of factor three as a measure of equal educational opportunity. Likewise, during cross-examination of witnesses for the defendants, the justification for the inclusion of factor three was not revealed.

With respect to factor four, "assessment of need for gifted programs," the Criteria Report noted:

> At the other end of the spectrum of exceptionality is the program for gifted students. This, too, is an element in any meas-

> urement of opportunities for equal education. An assessment was made of the number of students identified as gifted on each campus and of the percentage that those students are of the total school membership.[55]

The rating procedure for factor four was that the lower the percentage of gifted students in a school, the more conducive a school was for closure. Again, the rationale and basis for the inclusion of this factor was neither stated in the Criteria Report nor revealed under cross-examination of the defendants.

Notwithstanding the absence of any educational rationale for using factors three and four, the issue still remained that these factors tended to penalize minority schools. I presented testimony and tabular data to this effect. It is widely known in the field of school psychology that minority students in the nation, compared to Anglo students, tend to be disproportionately overrepresented in EMH classes (e.g., Mercer, 1973; Henderson and Valencia, in press; Valencia, 1982) and tend to be disproportionately underrepresented in classes or programs for the gifted (e.g., Adler, 1968; DeLeon, 1983). Although the reasons for the disproportionately high numbers of minorities in EMH classes are debatable (e.g., Lambert, 1981), a strong case can be made that the inclusion of factors three and four tended to identify--in an *a priori* fashion--minority schools. Consequently, minority schools tended to surface as most conducive for closure. Tabular data, which contains evidence on this point, are shown in Table 8. The analysis presented in Table 8 found the following: First, the percentages in column c, which combined the LD/EH and EMH percentages, were the figures used for school ratings on this special education factor. The rank order correlation analysis

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Table 8

Rank Order Comparisons Between Percentage of Minority Student Body and LD/EH, EMH, LD/EH Plus EMH, and Gifted Memberships

| School | Ranks and Percentages<br>% Minority | a<br>% LD/EH | b<br>% EMH | c<br>% LD/EH & EMH | d<br>% Gifted |
|---|---|---|---|---|---|
| Union | 1 (94.2) | 2 (7.39) | 1 (6.99) | 1 (14.38) | 8 (2.03) |
| South | 2 (87.7) | 4.5 (6.73) | 3 (3.68) | 3 (10.41) | 10 (1.23) |
| Hayden | 3 (75.0) | 4.5 (6.73) | 4 (3.01) | 4 (9.74) | 9 (1.37) |
| North | 4 (64.4) | 9 (5.20) | 2 (5.82) | 2 (11.02) | 11 (1.06) |
| East | 5 (56.7) | 3 (6.79) | 10 (0.00) | 9 (6.79) | 2 (4.76) |
| West | 6 (25.7) | 10 (4.78) | 5 (2.34) | 7 (7.12) | 5 (2.90) |
| Maryvale | 7 (19.5) | 8 (5.35) | 7 (1.60) | 8 (6.95) | 4 (3.13) |
| Browne | 8 (18.0) | 6 (6.21) | 8 (1.47) | 6 (7.68) | 6 (2.41) |
| Alhambra | 9 (13.2) | 11 (4.30) | 6 (1.95) | 10 (6.24) | 7 (2.08) |
| Central | 10 (9.4) | 7 (5.88) | 10 (0.00) | 11 (5.88) | 1 (6.15) |
| Camelback | 11 (7.8) | 1 (7.93) | 10 (0.00) | 5 (7.93) | 3 (4.53) |

[a] $\underline{p}$ = .22 (NS)

[b] $\underline{p}$ = .81 (significant <.01)

[c] $\underline{p}$ = .70 (significant <.05)

[d] $\underline{p}$ = -.68 (significant <.05)

Source: Adapted from the *Criteria Report*, pp. 14-15.

---

showed a significant relation between minority enrollment and LD/EH and EMH percentages, confirming my point that this factor tended to penalize minority schools by predisposing them to receive a high ranking for closure conduciveness. Furthermore, this *a priori* bias became more evident in the analysis presented in columns a and b. The purpose here was to examine the independent relations between the LD/EH and minority enrollment percentages and between EMH and minority enrollment percentages. I hypothesized that since minority students tend not to be overrepresented in special educational categories of learning disabilities and emotionally handicaped,[56] there would not be a significant rank order relation between LD/EH and minority enrollment percentages. The analysis presented for the minority enrollment rankings and the LD/EH rankings in column a confirmed this hypothesis. The analysis for column b data, which ranks the schools by EMH percentages, showed a statistically significant rank order relation between EMH and minority enrollment percentages. In conclusion, the above independent analyses (columns a and b) and the aggregate analysis (column c) in Table 8 demonstrated that the use of the EMH percentage at each school as part of factor three was a statistically significant predictor of ethnic enrollment. Because of the positive correlation, the schools with higher minority enrollment surfaced as most conducive for closure.

Column d in Table 8 contains the analysis for factor four, "assessment of need for gifted programs." Again, I hypothesized that since minority students tend to be underrepresented in programs for the mentally gifted, there would be a negative relation between gifted and minority enrollment percentage ranks. The rank order correlation analysis revealed a statistically significant relation, indicating that as minority school enrollment percentage increased, the percentage of gifted program students decreased. Thus, I concluded and testified that the inclusion of factor four as an index of closure conduciveness tended to penalize minority schools because of the factor's excellent *a priori* predictability of ethnic percentage of the District's schools.

The final school closure conduciveness ratings for factors three and four are presented in Table 9. The results presented in Table 9 for factors three and four showed the same patterns as the previously

Table 9

School Closure Conduciveness Rating for Factor Three: Assessment of Special Education Needs

| Special Education Students as a % of Membership | Closure Conduciveness Score | Closure Conduciveness Score for Each School: School | LD/EH & EMH% | Score |
|---|---|---|---|---|
| Under 6.0% | 5 | Central | 5.88 | 5 |
| 6.01 to 8.0 | 4 | Alhambra | 6.24 | 4 |
| 8.01 to 10.0 | 3 | *East | 6.79 | 4 |
| 10.01 to 12.0 | 2 | Maryvale | 6.95 | 4 |
| over 12.0 | 1 | West | 7.12 | 4 |
| | | Browne | 7.68 | 4 |
| | | Camelback | 7.93 | 4 |
| | | *Hayden | 9.74 | 3 |
| | | *South | 10.41 | 2 |
| | | *North | 11.02 | 2 |
| | | *Union | 14.38 | 1 |

School Closure Conduciveness Rating for Factor Four: Assessment of Need for Gifted Programs

| Gifted Students as a % of Membership | Closure Conduciveness Score | Closure Conduciveness Score for Each School: School | Gifted % | Score |
|---|---|---|---|---|
| Over 5.25 | 5 | Central | 6.15 | 5 |
| 4.01 to 5.25 | 4 | *East | 4.76 | 4 |
| 2.76 to 4.00 | 3 | Camelback | 4.53 | 4 |
| 1.51 to 2.75 | 2 | Maryvale | 3.13 | 3 |
| 1.50 and under | 1 | West | 2.90 | 3 |
| | | Browne | 2.41 | 2 |
| | | Alhambra | 2.08 | 2 |
| | | *Union | 2.03 | 2 |
| | | *Hayden | 1.37 | 1 |
| | | *South | 1.23 | 1 |
| | | *North | 1.06 | 1 |

* Indicates a minority school; all other schools are Anglo schools.

Source: Adapted from the Criteria Report, pp. 14-15 and p. 33.

analyzed factors one and two--minority schools typically surfaced as highly conducive to closure.

## Factor Five: Experience of Teaching Staff

The District's rationale for the inclusion of this factor for the determination of closure conduciveness was as follows:

> Ability of an individual teacher to provide for the educational needs of his or her students is not necessarily a factor of the age or experience of that teacher. However, it is probably safe to assume that, on the average of some 1,357 professional staff members, experience within this district and the maturity which comes with that experience are positive factors in meeting the challenge of educating young people, especially of high school age.
>
> It is on that assumption that a measure of length of service or experience within the Phoenix Union High School District becomes one of the factors in providing for some equality of education on the several campuses. While factual evidence may be lacking to prove that a faculty with an average length of service in the district of about 8 years is more or less capable, the common perception is that a more experienced faculty is likely to meet the challenges better than a less experienced one.[57]

My testimony regarding factor five focused on the Criteria Report's assumed relation between the length of a teacher's experience and the teacher's ability to provide high quality teaching and equal educational opportunity. I did a thorough hand and computerized literature search and did not locate a single study that would support the District's assumption that length of teaching service was positively correlated with higher quality teaching. Searching for relevant studies in this area is problematic as ERIC, the primary data bank for education-relation research, does not list a descriptor for "length of service" or "teacher age."[58] The closest descriptor appears to be "teacher experience." Likewise, the criteria variables also appear to be limited, with "teacher effectiveness" being the closest descriptor. However, one review article was located that proved to be quite helpful (Grambs, 1980). Grambs, a gerontologist, reviewed the scant body of available literature on teacher age and teaching competence and concludes:

> There are no hard data on the demographics of the teaching professions or research which supports any relationship between age and quality of teaching at the school or college level.[59]

Furthermore, some of Grambs' observations cast doubt on the District's assumption of a positive relation between length of service and teaching effectiveness. She notes:

> Though a research base is lacking, there is a superabundance of comment about the negative influence of the older teacher...there is suspicion that an aging faculty is not as effective as a younger group.[60]

The inclusion of factor five was questionable just for its unsupportable assumption, but the use of this factor was also challenged because of its tendency to penalize minority schools and favor Anglo schools with respect to closure conduciveness. My testimony on this contention centered on two interrelated points. First, there is a widely held perception that, until recently, minority teachers have not been hired to the same extent as their Anglo colleagues. Therefore, generally speaking, the mean years of teaching experience of minority teachers is likely to be lower than that of Anglo teachers within the same school district. Second, there is some evidence that minority teachers tend to teach in minority schools. For example, the U.S. Commission on Civil Rights Mexican American Education Study (1971a) reported that Mexican American teachers were severely restricted in their school assignments. The majority of Mexican American teachers were assigned to schools in which Mexican American students were the predominant ethnic group.

The previous two points taken together were generalizable to the Castro case. The following three tables, taken in succession, provide some support for the biasing effect of factor five. Table 10 contains an analysis of the relation between the percentage of minority teachers of the total teaching staff and mean years of service of teachers.

Table 10

Rank Order Comparison Between Percentage of Minority Teachers of the Total Teaching Staff and Mean Years of Teaching Service for Total Teaching Staff

| | Minority Teaching Staff[a] | | Mean Years of Service (Total Teachers) | |
|---|---|---|---|---|
| School | % | Rank | $\bar{x}$ | Rank (lowest) |
| South | 33.9 | 1 | 9.01 | 2 |
| Union | 33.3 | 2 | 8.24 | 1 |
| Hayden | 11.5 | 3 | 10.73 | 4 |
| Browne | 10.8 | 4.5 | 10.17 | 3 |
| West | 10.8 | 4.5 | 13.94 | 11 |
| East | 8.3 | 6 | 13.35 | 10 |
| North | 7.7 | 7 | 11.17 | 5 |
| Central | 7.2 | 8 | 12.65 | 8 |
| Maryvale | 7.1 | 9 | 12.40 | 6 |
| Alhambra | 5.6 | 10 | 12.46 | 7 |
| Camelback | 4.9 | 11 | 13.18 | 9 |

[a] Minority refers to American Indian, Black, Mexican American, and Asian American.

$p$ = .59 (significant < .05)

Source: The data for percentage of minority teachers and mean years of service are taken from the Criteria Report, p. 23 and p. 16 respectively.

The results shown in Table 10 indicated that there was a statistically significant relation between the percentage of minority teachers in the District's schools and the average length of teaching service of the total teaching staff, meaning that as the percentage of minority teachers increased, the mean years of service of the total teaching staff tended to decrease.[61]

Table 11 contains data and an analysis that attempted to examine the second interrelated point, that there would be a tendency for minority teachers to be assigned to minority schools.

Table 11

Rank Order Comparison Between Percentage of Minority Teachers of the Total Teaching Staff and Percentage of Minority Student Body Enrollment

| | Minority Teaching Staff | | Minority Student Enrollment | |
|---|---|---|---|---|
| School | % | Rank | % | Rank |
| South | 33.9 | 1 | 87.7 | 2 |
| Union | 33.3 | 2 | 94.2 | 1 |
| Hayden | 11.5 | 3 | 75.0 | 3 |
| Browne | 10.8 | 4.5 | 18.0 | 8 |
| West | 10.8 | 4.5 | 25.7 | 6 |
| East | 8.3 | 6 | 56.7 | 5 |
| North | 7.7 | 7 | 64.4 | 4 |
| Central | 7.2 | 8 | 9.4 | 10 |
| Maryvale | 7.1 | 9 | 19.5 | 7 |
| Alhambra | 5.6 | 10 | 13.2 | 9 |
| Camelback | 4.9 | 11 | 7.8 | 11 |

$\underline{p} = .84$ (significant $< .01$)

Source: Adapted from the Criteria Report, p. 23.

The results in Table 11 showed a significant relation between the percentages of minority teachers and the percentage of minority students, revealing a strong pattern for minority teachers to be assigned to schools containing the higher percentages of minority students.

The third table, Table 12, contains data on the hypothesis that factor five penalized minority schools. The results shown in Table 12 provided some support that the inclusion of factor five tended to bias the ratings against minority schools, since it identifies a pattern of minority schools as having teachers with the lowest mean years of service.

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Table 12

Rank Order Comparison Between Percentage of Minority Student Body Enrollment and Mean Years of Teaching Service for Total Teaching Staff

| | Minority Student Enrollment | | Mean Years of Service (Total Teachers) | |
|---|---|---|---|---|
| School | % | Rank | $\bar{x}$ | Rank (lowest) |
| Union | 94.2 | 1 | 8.24 | 1 |
| South | 87.7 | 2 | 9.01 | 2 |
| Hayden | 75.0 | 3 | 10.73 | 4 |
| North | 64.4 | 4 | 11.17 | 5 |
| East | 56.7 | 5 | 13.35 | 10 |
| West | 25.7 | 6 | 13.94 | 11 |
| Maryvale | 19.5 | 7 | 12.40 | 6 |
| Browne | 18.0 | 8 | 10.17 | 3 |
| Alhambra | 13.2 | 9 | 12.46 | 7 |
| Central | 9.4 | 10 | 12.65 | 8 |
| Camelback | 7.8 | 11 | 13.18 | 9 |

$p = .59$ (significant < .05)

Source: Adapted from the Criteria Report, p.16.

Table 13 lists the final closure conduciveness rating for factor five. As seen in the ratings for the previous factors, the "experience of teaching staff" factor also resulted in the pattern of minority schools being judged to be most conducive for closure compared to the District's Anglo schools.

In conclusion, my testimony with respect to the penalizing effect of factor five on minority schools did have some influence on the judge's decision, as seen in the following excerpt from his Memorandum of Findings and Order:

---

Table 13

School Closure Conduciveness Rating for Factor Five:
Experience of Teaching Staff

| | | Closure Conduciveness Score for Each School | | |
|---|---|---|---|---|
| Average Years of District Service | Closure Conduciveness Score | School | Average Years of Service | Score |
| Over 13 years | 5 | West | 13.94 | 5 |
| 12 to 13 | 4 | *East | 13.35 | 5 |
| 11 to 12 | 3 | Camelback | 13.18 | 5 |
| 10 to 11 | 2 | Central | 12.65 | 4 |
| less than 10 years | 1 | Alhambra | 12.46 | 4 |
| | | Maryvale | 12.40 | 4 |
| | | *North | 11.17 | 3 |
| | | *Hayden | 10.73 | 2 |
| | | Browne | 10.17 | 2 |
| | | *South | 9.01 | 1 |
| | | *Union | 8.24 | 1 |

* Indicates a minority school; all other schools are Anglo schools.

Source: Adapted from the Criteria Report, pp. 16 and 38.

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> ...school officials are required under the fourteenth amendment to attempt to make a fair and equitable distribution of teachers and administrators with experience and advanced training. Spangler v. Pasadena City Board of Education, 311 F. Supp. 501, 524 (C.D. Cal. 1970). By having assigned teachers with less experience and training to minority schools and then to use that as a factor for closure of the school is to use a factor that is clearly violative of the plaintiffs' rights under the fourteenth amendment.[62]

## Factor Six: Number of Teachers by Subject Area

The rationale for using factor six as an index of closure conduciveness under the equal educational opportunity criterion was as follows:

> ...There seems to be little doubt that the number of courses offered within a specific subject area, or more specifically the number of teachers available to teach a given subject on a campus is a serious limiting factor in equality of offerings. A single teacher in an Art department will not have variety of talent and ability to provide the scope of opportunities as will 3 or 4 teachers in that area.[63]

The assumption that the number of teachers in a subject area is related to the equality of course offerings contains no mention of the size of the student body. It is common sense that the number of teaching positions allocated to a particular school directly corresponds to the size of the respective student constituency. It also follows that the breadth of course offerings in a given school is related to the size of its teaching staff. Therefore, the inclusion of factor six tended to penalize the schools with smaller student bodies.

In addition to the above criticism, my testimony focused on the nature of the subject areas in which variability in offerings was present in the different high schools. First, as a point of information, the rating procedure for factor six involved a school-by-school listing of the "number of subject areas with 2.0 or fewer FTE teachers" (FTE stands for Full Time Equivalent). In the listing, only an aggregate analysis was done. That is, the subject areas to which two or fewer teachers were assigned received only an analysis of the total curriculum. No within-curriculum comparisons were made (e.g., two or fewer FTE in mathematics compared to home economics). My testimony on the notion of within-curriculum FTE allocations provided some evidence that the District's aggregate analysis obscured the issue of equality of course offerings. The example given during testimony was that Phoenix Union (which had the highest number [n=6] of subject areas with two or fewer FTE teachers) had its two or fewer FTE in predominantly "peripheral" and not "core" curriculum areas.[64] The following table contains data on this point by comparing Phoenix Union, one of the smallest schools in student enrollment (n=1,231) and one of the smallest in total FTE (n=68), with Alhambra, one of the largest schools in student enrollment (n=2,980) and FTE (n=136).

According to the analysis shown in Table 14, of Phoenix Union's six subject areas in which two or fewer FTE were assigned, 83.3% (n=5) were in the peripheral area and only one was in the core area. This same pattern held for the other minority schools, which also had high numbers of subject areas in which two or fewer FTE were assigned. Based on this analysis, I testified that although the minority schools, compared to the Anglo schools, did indeed have fewer FTE in the total subject areas, the particular subject areas with fewer FTE were overwhelmingly those that could be considered peripheral to the curriculum of a comprehensive

Table 14

Comparison of Within-Curriculum Offerings for Phoenix Union and Alhambra on Factor Six--Number of Subject Areas with 2.0 or Fewer FTE Teachers

| Core Course | Phoenix Union Number of FTE | Alhambra Number of FTE |
|---|---|---|
| English | 8.8 | 15.8 |
| Foreign Language | *1.0 | 3.0 |
| Mathematics | 6.3 | 12.0 |
| Reading | 5.7 | *1.0 |
| Science | 2.2 | 9.0 |
| Social Studies | 6.0 | 13.0 |

| Peripheral Course | Phoenix Union Number of FTE | Alhambra Number of FTE |
|---|---|---|
| Art | *2.0 | 3.8 |
| Business Education | 4.5 | 11.2 |
| Health Education | *1.0 | 3.0 |
| Home Economics | *1.0 | 3.6 |
| Industrial Arts | *1.0 | 8.4 |
| Music | *1.0 | 2.6 |
| Physical Education | 2.8 | 9.9 |

* Denotes those subject areas in which there were 2.0 or fewer FTE.

Source: Adapted from the Criteria Report, p. 69.

high school. In the core curriculum areas, minority schools, compared to the Anglo schools, were holding their own in FTE allocations. Thus, because of the direct relation between student body size and FTE allocations and because the District's five minority schools were smaller in student bodies ($\underline{\bar{x}}$=1,561) than the six Anglo schools ($\underline{\bar{x}}$=2,646), the inclusion of factor six tended to penalize minority schools.

The final school closure conduciveness ratings for factor six are presented in Table 15. Once again, the pattern was clear. Minority schools surfaced as most conducive for closure. In the case of factor six, all five minority schools received the lowest ratings. Given the faulty assumptions of factor six, the manner in which the analysis was done, and the outcome of the ratings, there was strong empirical evidence that this factor penalized minority schools.

Table 15

School Closure Conduciveness Rating for Factor Six: Number of Teachers by Subject Area

| | | Closure Conduciveness Score for Each School | | |
|---|---|---|---|---|
| Number of Subject Areas with 2.0 or Less FTE Teachers | Closure Conduciveness Scale | School | Number of Areas | Score |
| 0 subject areas | 5 | Camelback | 0 | 5 |
| 1 | 4 | Alhambra | 1 | 4 |
| 2 | 3 | Browne | 1 | 4 |
| 3 | 2 | Central | 1 | 4 |
| More than 3 | 1 | Maryvale | 1 | 4 |
| | | West | 1 | 4 |
| | | *East | 2 | 3 |
| | | *Hayden | 3 | 2 |
| | | *South | 3 | 2 |
| | | *North | 4 | 1 |
| | | *Union | 6 | 1 |

* Indicates a minority school; all other schools are Anglo schools.

Source: Adapted from the Criteria Report, pp. 17 and 39.

## Factors Seven and Eight: Campus Adequacy to Serve Handicapped Students and Educational Adequacy

"Campus adequacy to serve handicapped students" and "educational adequacy" were the seventh and eighth factors, respectively, that were included under the equal educational opportunity criterion. Since these factors referred primarily to budgetary and physical aspects of the schools, I did not present testimony regarding them. It was my opinion that the inclusion of these factors under the equal educational opportunity criterion may have been inappropriate, and that a more logical place would have been under the "facility flexibility" criterion.[65] In cross-examination, witnesses for the defendants testified that factor seven was largely an index of fiscal aspects (cost estimate for each school to make the facilities adequate to meet the needs of handicapped students), and that factor eight dealt primarily with facilities (e.g., storage space, room sizes, lighting, acoustics).

Although I did not present testimony regarding factors seven and eight because they were outside my area of expertise, some observations can be made now that may shed some light on how these factors tended to penalize Phoenix Union. For example, the Criteria Report offered the following rationale for the inclusion of factor seven:

> How well a campus is prepared to serve the needs of handicapped students cannot be ignored as a factor in the measurement of equal educational opportunity for students. To the extent that the school facilities cannot serve these students is a measure of a lack of opportunities for those students.
>
> The Division of Administrative Services has assessed the existing facilities to determine the revisions required to serve handicapped students adequately. The cost of those revisions becomes the measuring stick to determine how well campuses are now serving these students.[66]

A closer inspection of the nature of the facility revisions the Criterion Report was referring to showed that the capital needs were designated for modifications for elevators, ramps, and restrooms. It appeared that the needed modifications were largely geared for handicapped students who had serious problems in physical mobility (e.g., because they were in wheelchairs). This important group comprised a miniscule percentage of the entire District's student population. Therefore, the inclusion of factor seven as an index of equal educational opportunity for all students may have been inappropriate.

Another interesting observation concerns the rankings of the 11 schools on cost estimates needed to make the schools adequate for serving handicapped students. The range of cost estimates was from a low of $2,400 (Browne) to a high of $262,350 (Phoenix Union). Excluding Phoenix Union momentarily, the range of estimates for the 10 other schools was $2,400 to $20,600, with a mean of $10,405. Phoenix Union's huge estimate was largely due to a cost of $250,000 for elevators. Excluding the elevator costs, Phoenix Union's estimated cost would have been $12,550, which was only $2,145 more than the mean estimate of the other 10 schools. Finally, I calculated a rank order correlation coefficient in order to see if the cost estimates were positively related to ethnic enrollments in the eleven schools. The results showed a statistically nonsignificant relation, indicating that factor seven was not a good predictor of ethnic enrollment. Thus, factor seven did not have a biasing effect against minority schools as was seen in the previously analyzed factors. Nevertheless, given the questionableness of factor seven's inclusion as an index of equal educational opportunity for all students and the disproportionate cost estimate due to elevators, this factor also tended to single out Phoenix Union as most conducive for closure.

Here is the rationale for including factor eight, "educational adequacy," as a factor of equal educational opportunity:

> In analyzing this component, more staff members were involved and more time was spent in collecting and assessing these data than on any single component. A procedure used by the Dayton, Ohio School District in its analysis formed the basis for this analysis. Both central office personnel qualified in the subject areas and the principal of each school were used in assessing specific sections of the report. The assessment was made of the physical facilities, including equipment for each area.[67]

The factors surveyed in factor eight covered 21 different areas. The range of possible points was 1-5 for each area, with 5 being the highest (most adequate). As stated in the preceding rationale, factor eight dealt with an assessment of physical facilities and equipment (this point was also made at the hearing). Examples of 2 of the 21 areas surveyed are:

MUSIC
- a. two separate rooms, 1 band room--1,500 to 2,000 sq. ft. with ceiling heights of 12-16 ft., built in risers, adequate acoustics for band and choral
- b. adequate and secure storage for equipment, uniforms and music library
- c. minimum of 3 small (8x8) sound-proof rooms
- d. office space for band director and choral director

SCIENCE
- a. 35 sq. ft. per student
- b. adequate lab space and facilities per student
- c. proper heating, plumbing, ventilation, gas and electric service in labs
- d. adequate storage for living and non-living materials
- e. secured storage space for fragile, corrodible, or dangerous materials.[68]

After the 21 areas were assessed, each school was given a composite score. The range was from a high of 85.2 points (East) to a low of 62.2 points (Phoenix Union). There was no mention in the Criteria Report of how each area was assessed, except in the gross sense of a 1-5 rating scale. Based on the final ratings of school closure conduciveness, Phoenix Union was rated as the school most conducive for closure. A rank order correlation analysis showed no statistically significant relation between educational adequacy scores and ethnic enrollment percentages, revealing a nonbiasing effect toward minority schools. During the hearing, direct examination of one school board member revealed evidence that the upkeep and facility improvement of Phoenix Union had been deliberately neglected by the Board over the years. This neglect may explain why Phoenix Union was assessed so low on educational adequacy.

In conclusion, the preceding analysis and discussion of the equal educational opportunity criterion reveals that the inclusion of the eight factors (particularly factors one through six), in a singular and composite sense, were inappropriate indices of equal educational opportunity, and hence of closure conduciveness. The factors were faulty on several accounts. First, several of the factors lacked clear assumptions and rationale. Second, some of the stated assumptions could not be supported in light of empirical evidence and/or statistical analyses. Third, and perhaps most importantly, the factors appeared to be inherently biased against minority schools and in favor of Anglo schools. That is, in an a priori fashion, six of the eight factors were excellent predictors of the ethnic composition of the District's schools. In fact, the criteria factors were better predictors of ethnic *enrollment percentage than of the intended criterion variable, namely the delivery of equal educational opportunity*. Table 16 contains data for the entire analysis and highlights this final point.

The rank order comparison showed that indeed there was a strong correlation between the total equal educational opportunity scores and the percentages of ethnic minority students enrolled in the 11 schools; in other words, lower equal educational opportunity scores were associated with higher minority enrollment percentages. The nature and implication of this important relation, about which I testified at length at the injunctive relief hearing, evidently did bear heavily on the judge's

---

Table 16

Rank Order Comparison Between The Total Equal Educational Opportunity (EEQ) Score and Percentage of Minority Student Body Enrollment

| | Total EEQ Score | | Minority Student Enrollment | |
|---|---|---|---|---|
| School | Pts. (least) | Rank | % | Rank |
| Union | 9 | 1 | 94.2 | 1 |
| South | 17 | 2 | 87.7 | 2 |
| Hayden | 21 | 4 | 75.0 | 3 |
| North | 18 | 3 | 64.4 | 4 |
| East | 27 | 6 | 56.7 | 5 |
| West | 30 | 8 | 25.7 | 6 |
| Maryvale | 31 | 9 | 19.5 | 7 |
| Browne | 26 | 5 | 18.0 | 8 |
| Alhambra | 29 | 7 | 13.2 | 9 |
| Central | 33 | 10 | 9.4 | 10 |
| Camelback | 35 | 11 | 7.8 | 11 |

$p$ = .89 (significant < .01)

Source: Adapted from the *Criteria Report*, p. 48.

final ruling regarding the closure criteria and the issue of racial discrimination in intent. The judge noted the following in his Memorandum of Findings and Order:

> On October 4, 1979 the Board accepted criteria for the closure of one or more schools. The criteria and subsequent condensations thereof were prepared in such a manner that the conclusion was inevitable that a minority school would be subject to closure.[69]

## THE ISSUE OF IMPACT:

## RACIAL DISCRIMINATION IN THE STUDENT-DISPLACEMENT PROCESS

The second monumental challenge that faced the plaintiffs in the *Castro* case was to produce evidence that the closure of Phoenix Union and the subsequent dispersion and displacement of the students was racially discriminatory in impact and effect, in that the students' rights to an equal educational opportunity would be negatively impacted. The major limitation in providing evidence of adverse effects is that very little is known about the potential problems resulting from the closure of minority schools. Except for the theoretical base (Valencia, 1980) and empirical base (Valencia, in press) from the *Angeles* school closure case in California, there appears to be no other school closure literature and litigation from which to draw. Therefore, it was necessary for me to seek elsewhere in the social science literature to study the issue of school closures and potential impact on minority students. Two areas proved most helpful--normative school transition research and desegregation transition research. However, before this research is examined in some detail and discussed in the light of my testimony, it is first necessary to lay out conceptual schemes concerning the notions of "at risk" and "transition."

### Conceptualizing School Problems and School Failure Among Minority Students: The Notion of "At Risk"

One of the most widely documented observations in the educational literature is that minority students, compared to Anglo students, typically experience higher rates of grade retention, achieving below grade level, and dropping out of high school (e.g., Carter & Segura, 1979; Coleman and associates, 1966; Brown, Rosen, Hill & Olivas, 1980; U.S. Commission on Civil Rights, 1971-1974). Even granted some variability among minority students on variables such as language status, socioeconomic status, gender, geographic location, temporal period, individual ability, family sociocultural and home intellectual climate, there is still convincing evidence that minorities have faced persistent and even chronic problems in the educational system (Valencia, 1981). The segment of the minority student population that appears to have the most problems consist of those students from working-class, lower blue-collar backgrounds (e.g., U.S. Commission on Civil Rights, 1971b). Since minority students are typically overrepresented in the lower socioeconomic statuses and underrepresented in the higher socioeconomic statuses, the "ethnicity by social class" interaction becomes a powerful analytical tool to understand the variability of academic achievement between and within the nation's ethnic groups, including Anglos and ethnic minorities.

In light of the presence of variability in schooling outcomes among all ethnic and social class groups, it can be reasonably assumed that certain student groups are more or less vulnerable to problems and failure. That is, certain groups can be said to be at a relatively high or low risk (or probability) of having difficulties as they progress through the educational system. Although it is well beyond the scope and intent of this monograph to examine the major paradigms that have been advanced to explain minority school failure, most, if not all, of these theoretical postures agree: Based on the comparative observations of schooling outcomes (e.g., drop out rates), inner-city minority students, as a group, face the highest probability of having schooling problems.

This probability statement concerning schooling outcomes for minority students gets to the core of the notion of "at risk". In the elusive search for understanding how equal educational opportunity is provided or denied, two additional components come into play. Schooling outcomes, particularly differential advantages and privileges in such outcomes, cannot be fully understood without also examining ideology and institutional mechanisms (Valencia, 1981). The effects or outcomes of schooling are directly linked to certain institutional procedures or mechanisms. For example, in the case of the minority schooling experience, institutional practices such as bias in testing, segregation, and curricular differentiation have greatly influenced the limited outcomes of schooling for minority students. In turn, these institutional mechanisms have been developed, organized, maintained, and perpetuated by a complex set of attitudinal and ideological factors, for example, attitudes toward the educability of minorities as seen in the ideology of meritocracy.

In short, the above tripartite schema--ideology, mechanisms, and outcomes--can be a valuable investigatory procedure to link theory and practice when attempting to examine the minority schooling experience and the notion of at risk. That is, one can contend that working-class minorities are not only subject to heightened risks in schooling outcomes, but also in regard to discriminatory ideological currents and institutional procedures. Pushing this analysis along further, we explore the idea of "transition" next.

## Conceptualizing School Adjustment:
## The Notion of "Transition"

The construct of "transition" proves to be quite useful in the investigation of the potential impact of school closures on minority students. Transition connotes "life changes," "adaptation," "maladaptation," "adjustment," "maladjustment," and in some cases "stress." Transition in the context of "normative life crises" has been investigated in several social science disciplines. One strand of research involves the work of community psychologists (e.g., Felner, Primavera, & Cauce, 1981), who have noted that points of transition in life "...have been characterized as periods of psychological disequilibrium marked by both an increased opportunity for psychological growth and a heightened vulnerability to psychological disturbance..."[70] Given this conception of transition in the field of community psychology, it is not surprising that a key focus has been on preventive efforts in mental health.

A second, more recent social science strand, which contains a direct and substantial reference to the notion of transition, has been advanced by child developmentalist Urie Bronfenbrenner in his book, The Ecology of Human Development (1979). Drawing upon the classic work by Lewin (1935), Bronfenbrenner has developed a comprehensive theoretical model which essentially "...is a theory of environmental interconnections and their impact on the forces directly affecting psychological growth."[71] Among complex sets of numerous definitions, propositions, and hypotheses, Bronfenbrenner's theorizing on the phenomenon of human movement through ecological space is as follows:

> An ecological transition occurs whenever a person's position in the ecological environment is altered as a result of a change in role, setting, or both.
>
> Instances of ecological transitions as defined here occur throughout the life span... I shall argue that every ecological transition is both a consequence and an instigator of developmental processes... In sum, an ecological transition sets the stage both for the occurrence and the systematic study of developmental phenomena.[72]

The meshing of the community psychological literature that has investigated normative life transitions and crises and the ecological transition work of Bronfenbrenner offers a substantial heuristic and practical base to social scientists who are interested in the description, explanation, prediction, and control of school adjustment problems. Such adaptation problems appear to be quite common: 3 out of 10 school age children experience school maladaptation (Glidewell & Swallow, 1969; cited by Rickel & Smith, 1979). Certain ethnic minority groups (e.g., Hispanics and Blacks) are subject to a higher percentage of stressful conditions (Acosta, 1979), and low socioeconomic status groups, in general, suffer a higher prevalence of stress and mental health problems (Cox, 1978). It can then be assumed that low socioeconomic status minority students (particularly Hispanic, Black, and Native American groups) face a higher probability of school adjustment problems that are brought about by several kinds of school transition-related experiences. This contention of a heightened risk for minorities will be discussed in the next three sections (3, 4, 5) which are concerned with three types of school transition: normative-, desegregation-, and school closure-related events. The sixth section will describe and discuss the social structure and social climate of the receiving school. The seventh, and final section, which synthesizes the theoretical underpinnings and empirical evidence concerning the notions of at risk, transition, the three types of transition research, and climate of the receiving school, presents my hypotheses in light of the plaintiff's charges of adverse impact on minorities.

## Normative School Transition Research

Life transitions occur in three specific areas. They are family life, schooling, and career (Bogat, 1978; cited in Bogat, Jones, & Jason, 1980). At least three potential mediators of a person's ability to cope with and differentially adapt to life transitions have been identified: psychological characteristics of the person (e.g., personal competence), situational or environmental factors (e.g., task complexity), and the availability and accessibility of effective and instrumental support systems (Felner, Gintner, & Primavera, 1982). Recently, researchers have also sought to examine the antecedents and outcomes of early transition into adult roles (early marriage, childbearing, and school dropout) (see Howell & Frese, 1982).

With respect to school transitions, three types are distinct: (a) entering school for the very first time, (b) the natural matriculation progression from one school level to another (e.g., elementary to junior high), and (c) school transfers brought about by family mobility (Bogat et al., 1980).[73]

Normative school transition research has generally been the concern of community psychologists who have focused on both the nature of adaptation problems faced by students and the development of preventive programs (e.g., Bogat et al., 1980; Felner et al., 1981, 1982). In a brief review of the normative school transition literature, Felner et al. (1981, 1982) note that the available evidence on the potential impact of school transitions on a student's academic performance and adjustment is inconclusive. For example, some researchers have found a negative relation between the incidence of school changes and academic achievement (Bensen, Haycraft, Steyaert, & Weigel, 1979; Kantor, 1965; Levine, Wesolowski & Corbett, 1966; Long, 1975; Schaller, 1975; all cited in Felner et al., 1981), but other investigators (Collins & Coulter, 1974; Cramer & Dorsey, 1979; Goebel, 1978; all cited in Felner et al., 1981) have been unable to support these findings. Felner et al. (1981) have observed that the inconsistent results were likely due to methodological problems; specifically, social class, age, sex, and racial variables were not controlled. A second area of concern voiced by Felner and associates was that previous school transition research concentrated on the impact of cumulative transfers, while nearly totally ignoring transitions of normal school progression (e.g., promotion to high school) and single transfer due to residential mobility. With these concerns in mind, Felner et al. (1981) designed their study. This important investigation is discussed next.

The subjects in the Felner et al. (1981) study were 250 students randomly selected from three public high schools in a northeastern community. The subjects were attending schools primarily serving minority, low socioeconomic status students; 66.8% of the subjects were Black, 22.4% white, 9.6% Hispanic, and 1.2% other.[74] The predictor variables were school transitions (number of cumulative school changes, any single school transition from grade 1 to 9, and transition from grade 8 to grade 9 [beginning high school]); the criterion variables were grade point average (GPA) and attendance figures (absenteeism record). Separate correlational analyses were done for each sex and ethnic group.

In summary, the results were:

1. Regarding cumulative school transitions:
    a. Significant negative relations were found between total number of school transfers and GPA for Blacks and Hispanics, and a nonsignificant relation was observed for whites.
    b. Tests for significance of difference between the correlations for the three ethnic groups revealed no significant differences. However, Black-white and Hispanic-white comparisons approached significance ($p<.09$ and .07, respectively).
    c. No significant relations were found between number of transfers and number of recorded absences by ethnic comparisons.
    d. Significant negative relations between number of school changes and GPA by sex were noted; no significant differences were found for school changes and absenteeism.
    e. A sex by ethnic subgroup analysis showed a significant relation for Black females on school changes and GPA and for white females on school changes and absenteeism.
2. Concerning any single school transition in grade 1-8:

   a. Compared to a control group of nontransfer students, no significant differences were noted in GPA drops and absenteeism increases for the transfer subjects.

3. Regarding the transition from grade 8 to 9:

   a. On an aggregate basis, students' GPA significantly decreased and absenteeism significantly increased.

   b. Based on subjects being identified as having a history of "high" or "low" mobility, a significant main effect for race was noted with whites faring significantly better on GPA compared to Blacks.

The major conclusions drawn by Felner et al. (1981) were, in general, that cumulative transfer and the transition into high school presented students with heightened risks for academic problems, particularly for ethnic minority students. This study supported previous research which has found that minority students (Levine et al., 1966; cited in Felner et al., 1981) and students from lower socioeconomic status backgrounds (Glidewell, Kantor, Smith, & Stringer, 1965; cited in Felner et al., 1981) appear to exhibit greater difficulty in adjustment because of school transitions of the normative type.

In conclusion, the following statement from Felner et al. (1981) appears to be quite appropriate in the context of the Castro case:

> It may be that factors such as socioeconomic status, the precipitants for the move, and the geographic distance it covers, which have also been suggested as potentially associated with vulnerability to school mobility...may be systematically different among the ethnic subgroups.... Of particular interest is that those students who seem most vulnerable during the transition to high school are those who may already be considered at risk either due to their prior history of school mobility or ra-

> cial background... sharp drops in academic performance, for whatever reason, are frequently associated with the development of enduring school difficulties and dropping out...75

The main point I developed at the Castro hearing was that if lower socioeconomic status minority students are most vulnerable in the case of normal school transitions, then transitions that are related to abnormal and more stressful conditions (desegregation and school closures) tend to place such students at even more heightened risks for school problems. These atypical types of transitions are discussed next.

## Desegregation Transition Research

The second major body of social science research I resorted to in order to examine the potential impact of the closure of Phoenix Union and the subsequent dispersion of minority students was the desegregation research base. The desegregation literature was selected because under the District's open enrollment policy, overwhelming numbers of students from Phoenix Union and East (a two-thirds minority school also closed at the same time as Phoenix Union) chose to enroll in 1982-83 at the predominantly Anglo Central High School, the closest school for most of the students residing in the Phoenix Union and East attendance areas. For the 1981-82 school year, Central had an enrollment of 2,044 students (82% Anglo and 18% minority). However, based on 1982-83 preregistration figures, Central's enrollment would increase 57% to about 3,200 students (58% Anglo, 42% minority). This situation could be classified as a type of desegregation (type "b") based on St. John's (1981) description of the four ways in which desegregation can come about: (a) residential change, (b) rezoning of attendance areas or closing a segregated school and transfer of students, (c) voluntary transfer of selected students, and (d) total district desegregation. No matter how one defines desegregation, Central high was indeed going to experience this process as indicated by these dramatic changes in the proportions of Anglo and minority students for the 1982-83 school year.

Although desegregation research is plagued by major methodological problems (St. John, 1981), the existing research has much to say about the potential impact of school closures on students (Anglo and minority), particularly in those closure situations in which desegregation appears to be an outcome in the student displacement process. Focusing on the common body of theory dealing with marginality and transition, as previously discussed, I gravitated to two aspects of desegregation research which helped to shed some light on school closure impact: psychological adjustment and academic adjustment/progress. Specifically, the area investigated under psychological adjustment was "school stress and anxiety;" for the academic adjustment/progress aspect, the "normalization of instruction and grades" phenomenon and "postdesegregation retention" were studied. Additional rationales for focusing on the psychological and academic aspects were based on the charges of the plaintiffs (allegations of irreparable psychological and educational effects) and my theorizing (Valencia, 1980) and empirical investigation (Valencia, in press) of adverse psychological and academic impact as related to minority school closures in the _Angeles_ case.

_School Stress and Anxiety_. The conceptual status of stress is somewhat problematic because of vague definitions and obscure mediating constructs (Wills & Langer, 1980).[76] One approach is first to identify the fundamental social-psychological processes that are related to or cause stress, and then to index stress by figuring the extent to which the identified processes exist for a particular person (Wills & Langer, 1980). In this approach, stress is considered in the context of: (a) the individual's lack of perceived control over events (e.g., the construct of "learned helplessness"), and (b) threat to one's self-esteem (Wills & Langer, 1980). Another useful way of conceptualizing stress is by viewing it as either a "cause," an "effect" or an "interaction" (Cox, 1978). Describing these three scientific approaches to the study of stress, Cox (1978) states:

> The first approach treats stress as a dependent variable for study, describing it in terms of the person's response to disturbing or noxious environments. The second approach describes stress in terms of the stimulus characteristics of those disturbing or noxious environments, and thus usually treats it as an independent variable for study. The third, and possibly most adequate, approach views stress as the reflection of a lack of 'fit' between the person and his environment. Stress in this form is studied in terms of its antecedent factors and its effects. It is seen as an intervening variable between stimulus and response. There is common ground between these different approaches, and they differ most in where they lay the emphasis in the definitions they propose, and in the methods they adopt.
>
> In all three approaches the word environment is used in the widest sense, and therefore refers to both the person's internal and external environments and both his physical and psychosocial environments.[77]

Particularly useful in conceptualizing stress is the above interaction model described by Cox (1978). The main characteristics of stress under the interactional model are "competing demands," "imbalance," and "methods of coping." In brief, competing demands arise when there are competing social pressures between the demand on a person and his/her ability to cope. Second, stress arises (psychological and physiological) when there is an imbalance between the person's perception of the demand and the person's perception of his/her capability to meet the demand. Third, imbalance gives rise, if coping is important, to methods of coping with the source of stress. The consequences of coping can be basically effective and adaptive or ineffective and maladaptive. If it is the latter, then psychological disorders may occur (e.g., low self-esteem, helplessness, insecurity, despair, anxiety, and demoralization). In short, ineffective coping with stress can result in broad types of disorders, ranging from a slight bruise to one's ego to the ultimate tragedy, suicide.

The study of the nature and intervention strategies of stress, in general, can produce profound insight into a very specific type of stress--school stress--and a possible outcome, anxiety. As in the case of stress, the construct of anxiety is also characterized by a diversity of conceptions.[78] Phillips (1978) in a comprehensive work entitled School Stress and Anxiety: Theory, Research, and Interventions has adopted a useful heuristic device for studying school anxiety. His paradigm largely draws from Atkinson and Feather's (1966) work on approach-avoidance and the need to avoid failure, and from Lazarus' (1966) theory of "psychologic" stress. In brief, Phillips' (1978) paradigm includes three classes of factors in coping activities: (a) the degrees of threat, (b) factors in the school situation, and (c) factors in the child. Under this paradigm, if stress conditions in the school are perceived as threatening, coping processes occur in order to reduce or eliminate the potential harm. Anxiety, along with other types of reactions (e.g., various defensive mechanisms), has either adaptive or maladaptive effects on school learning and behavior. Further placing his theorizing and knowledge of the empirical literature in the context of school problem behavior, Phillips (1978) reports:

> Some investigators have held that since a child's main school motivation is to find a place for himself in his classroom group, lack of acceptance leads to increasingly socially destructive aims and, eventually, to hopelessness and withdrawal.... Thus the interpersonal setting is the crucible in which the child works out his destiny, for teacher and peer appraisals not only indicate his school success and failure, they indicate to him something more important--the place he has in the classroom group....
>
> Our concerns deal with isolation in the sense of not being psychologically visible to, or of being ignored and avoided by, members of the group. In this latter context, social isolation through avoiding, ignoring, or rejecting will lead to two types of consequences. The first is the experience of anxiety and other stress (threat) reactions, and this would be followed by a diminution or a heightened tempo of activity. It is anticipated that these changes in activity would be, in many instances, classed as underachievement and problem behavior by teachers and peers....
>
> Individuals who are anxious also are disposed toward being threatened by novel, strange, and unfamiliar circumstances, and thus ought to prefer well-explored milieus and familiar situations....[79]

How are school stress and anxiety distributed in our school age population? The available literature has documented higher amounts of stress and anxiety among students of lower socioeconomic status and/or ethnic minority backgrounds (e.g., Coney & West, 1979; Dunn, 1968; Hawkes & Furst, 1971; Hawkes & Koff, 1970; Lott & Lott, 1968; Phillips, 1966, cited in Phillips, 1978; Tseng & Thompson, 1969, cited in Coney & West, 1979).

With respect to school stress and anxiety in desegregation research, the findings are less conclusive. St. John (1975) reviewed seven studies and found that only two studies (Slone, 1968; Wessman, 1969; both cited in St. John, 1975) reported significant or near significant increases in anxiety when segregated versus desegregated groups were compared. A more typical finding (and St. John's major conclusion) was that the general anxiety level of Black children was higher than whites in segregated settings, but there was no increase following transfer to desegregated schools (e.g., Mahan, 1968, cited in St. John, 1975). However, more recent research has cast some doubt on this conclusion. Studies by Edwards (1979), Gerard and Miller (1975), Mercer, Coleman and Harloe (1974, cited in Epps, 1975), and Schilhab (1976, cited in Phillips, 1978) have documented that Black and Mexican American elementary level students, compared to their Anglo peers, generally experienced increases in general anxiety levels after desegregation. Edwards (1979) investigated the potential effects of stress on 637 Black and white fourth-, fifth-, and sixth-grade children as related to a court-ordered integration plan in Florida. Transferred and non-transferred students were administered the State-Trait Anxiety Inventory for Children (STAIC) (Spielberger, Edwards, Montouri, & Lushene, 1971, cited in Edwards, 1978). The STAIC was administered one week before transfer and six weeks after transfer. The STAIC measures state anxiety (A-State), which is "...conceptualized as emotional reactions characterized by feelings of tension and apprehension and heightened arousal of the autonomic nervous system."[80] Trait anxiety (A-Trait) is conceived as proneness to anxiety, which varies from person to person. The finding that is most relevant to the present discussion was that transferred Black and white children did not show differences in A-State scores, but transferred Blacks, compared to transferred whites, had significantly higher A-Trait scores. The transferred Blacks, who scored higher on the A-Trait dimension then any other subgroup, were largely from low socioeconomic backgrounds.

In another study, which is considered to be one of the most exhaustive investigations on desegregation and used one of the largest samples ever studied longitudinally, Gerard and Miller (1975) examined a number of variables, factors, and conditions that were believed to be mediators of the desegregation process. The subjects numbered nearly 1,800 Anglo, Black, and Mexican American kindergarten through grade six children who were part of a massive desegregation plan in Riverside, California. The children were desegregated in the autumns of 1965-1967, and subsequent postdesegregation data were gathered through 1970-71. Regarding our discussion on school stress and anxiety, Gerard and Miller's study on personality traits and adjustment is most relevant here. Five scales ("general anxiety," "school anxiety," "others' attitudes," "self-attitudes," and "achievement need") were administered to the subjects during predesegregation (1966) and during postdesegregation year one (1967) and postdesegregation year three (1969).[81] In brief, the major findings with respect to anxiety were:

1. At the time of predesegregation and postdesegregation years one and three, Mexican American children, compared to Anglos and Blacks, scored significantly higher on general and school anxiety; Blacks, compared to Anglos, scored significantly higher on both anxiety measures. Even with socioeconomic status controlled, Anglos scored more favorably on the anxiety measures.

2. Using a repeated-measures design, the subjects' anxiety scores were analyzed for each of the three years (1966, 1967, and 1969). For the aggregate sample, scores on the general anxiety scale decreased following desegregation (1966 to 1967) and remained low after post-desegregation year three (1969). However, although there was a similar slight decrease in scores on the school anxiety scale after the first year of desegregation, the anxiety level was still higher than what it had been before desegregation. Time effects by ethnicity revealed that Blacks, particularly young children, experienced increased levels of general anxiety in 1969, compared to Anglos and Mexican Americans.

In conclusion, given that empirical studies in psychiatric epidemiology nearly always show a greater frequency of stress-related psychological disorders among adult populations of people of lower socioeconomic status (Wills & Langer, 1980) and among ethnic minority adults (e.g., Acosta, 1977), it is not surprising that low socioeconomic status minority children and youth are also at heightened risk for experiencing stress and anxiety as they progress through the educational system, particularly during periods of transition such as desegregation. The implications of this in light of the _Castro_ case will be discussed later in this paper when this entire section on impact is synthesized.

_Normalization of Instruction and Grades_. One of the major assumptions underlying desegregation policy is that there will be salutary academic effects on minority students (e.g., Gerard & Miller, 1975). However, a number of researchers (e.g., Clement, Eisenhart, & Wood, 1976; Gerard & Miller, 1975; Miller, 1977, cited in St. John, 1981; St.

John, 1975, 1981) have concluded that the available research does not provide clear and strong evidence that desegregation will quickly close the minority-white gap in achievement. Also, there appears to be a consensus that the benefits or harms of desegregation are largely dependent on how desegregation is implemented (St. John, 1981). In essence, interracial contact by itself appears not to be enough. Rather, it is the quality of the contact that seems to be most crucial (Amir, 1969; Gerard & Miller, 1975).[82]

One possible mediator of desegregation achievement effects on minorities that has been identified and investigated is the "normalization of instruction and grades" phenomenon. Gerard and Miller (1975), drawing from the early work of Wilson (1963), have described the normalization phenomenon as "...the tendency of teachers to adapt instruction to the average level of the class...grading as well as instruction tends to be normalized in the classroom...."[83] The normalization process, hypothesized to operate during desegregation, appears to have the following chronological properties (Gerard & Miller, 1975):

a. In predesegregation settings, minority students typically score lower than Anglos on standardized achievement tests.

b. If teachers do indeed normalize students' grades relative to their achievement scores, then minority students will typically be overgraded and Anglos undergraded.

c. During desegregation, when lower-achieving minority students are mixed in the same classrooms with higher-achieving Anglo students, instruction and grading will again tend to be normalized.

d. The grades for the higher-achieving Anglos will tend to improve (spuriously) compared to predesegregation grading patterns while lower-achieving minorities will tend to receive lower grades compared to predesegregation grading patterns. This occurs because teachers tend to use a convergent, standard, or common referent point for grading (e.g., normal curve) for both minority and Anglo students in the interracial classrooms.[84]

e. If the assumption is sound that grades serve as rewards or punishments that boost or lower achievement motivation, then such inducement will tend to increase Anglo achievement and decrease minority achievement.

To investigate this normalization hypothesis empirically, Gerard and Miller (1975), as part of their comprehensive desegregation study in Riverside, compared school grades and achievement for Anglo, Black, and Mexican American children during predesegregation and for three consecutive years after desegregation. Several major findings supported the existence of the normalization process. First, as hypothesized, the minority students were overgraded and Anglo students undergraded prior to desegregation. The grade-achievement discrepancy was calculated by subtracting each student's achievement in a given year from the received grade that year (standard scores were used for grades and achievement). Then, year-by-year comparisons were made. Second, for discrepancy measures taken for postdesegregation years one, two, and three, there was a gradual and progressive convergence of the discrepancy scores for both minority and Anglo children, indicating the implementation of a common grading standard for all children by the third year in which grading was completely normalized. Third, Gerard and Miller hypothesized that the gradual easing into the same grading patterns was likely due to the teachers' protecting the minority children from discovering their relatively poorer academic standing compared to the higher-achieving Anglos. That is, a double standard of grading might have been operative the first year after desegregation. The authors speculated that as time went on, the teachers came to believe that the minority children--through social comparison processes--would more easily accept their lower standing, hence lower grades.

Regarding the motivational implications and the lack of salutary effects, Gerard and Miller (1975) conclude:

> The state of affairs presented above could well have had demoralizing effects on the minority children. Since grades signal success or failure, they may spur or reduce motivation. Anglos would then tend to be encouraged and Blacks and Mexican-Americans to be discouraged by the consequences of normalized grading, which, in turn, might affect performance and result in a widening of the achievement difference between the groups. Such a situation contains all the necessary ingredients for creating a vicious circle....
>
> Normalization of grading may provide a key, or one of the keys, to why desegregation did not have the effects that were hoped for. If minority achievement had normalized as Katz (1964) and others would have predicted, normalized grading would have had no untoward effects on minority achievement. The fact that achievement did not normalize placed the minority child at an invidious disadvantage that, we are suggesting, probably took its motivational toll. Grading makes it all too clear just where a child stands in his class. A child who is operating at a level well below others in the class faces an extraordinarily difficult task in attempting to pull himself up, a task that is fraught with the problems imposed by negative expectations both of his teacher about him (deriving from the stereotypes she holds) and of him about himself (deriving from his poor grades).
>
> Minority students did not gain in achievement as a consequence of desegregation, nor did Anglos suffer.... In line with Wilson's (1963) findings, normalization of grading resulted in lower grades relative to achievement for Anglos and higher grades for minority pupils prior to desegregation. After desegregation, normalization of grading increased Anglo grades relative to achievement and lowered minority grades. The inev-

> itable invidious comparison was likely to have had deleterious effects on the minority children.[85]

The implications of the normalization phenomenon in the context of the Castro case and my court testimony will be discussed later.

Postdesegregation Retention. As previously mentioned in this monograph, Black and Chicano students, compared to their Anglo peers, typically experience higher dropout rates. For example, in its investigation of dropout rates in the southwestern United States, the U.S. Commission on Civil Rights (1971b) reported dropout rates of 40%, 33%, and 16% for Mexican American, Black, and Anglo secondary students, respectively. Furthermore, based on 1980 census data from Arizona, it has been reported that among Mexican Americans over 25 years of age only 46% have completed high school, compared to 75% of whites of the same age (La Red, 1982).

In the case of postdesegregation retention rates, St. John (1981) notes:

> In recent decades nationwide school retention rates have climbed dramatically for all youth, especially for blacks. Despite this trend, a number of commentators have noted an alarming increase in high-school withdrawals, suspensions, and expulsions of black youth in some desegregating systems, especially in the South.... In Boston the first year of desegregation saw innumerable white withdrawals as well. How many of these young people are "dropping out" of their own volition or in protest over conditions in mixed schools and how many are being "pushed out" by prejudiced school personnel is not clear. In either case an unexpected and serious problem has been flagged.[86]

Several investigations have reported increased dropout rates among minority students following desegregation (Bryant, 1968; Clement et al., 1976; Felice & Richardson, 1977a, 1977b). For example, Bryant (1968) sought to study the significance of any changes in the pre- and post-desegregation dropout rates of 769 white and 146 Black students enrolled in grades 8 through 11 in metropolitan Houston, Texas. Although there was no significant difference in the pre- and postdropout rates for whites, a highly significant increase was noted for Black students, particularly among Black males.

In another study, Felice and Richardson (1977a) attempted to investigate the effects of a court-ordered desegregation bussing plan on the subsequent dropout rate of Anglo, Black, and Mexican American students. In a southwestern community in 1971, a federal court ordered the bussing of 1,600 minority seventh through twelfth grade students to previously all-Anglo schools. The Felice and Richardson study was part of a larger four-year longitudinal desegregation study; thus Anglo and minority dropout data were available prior to desegregation (1971) and after (1975) for students who were desegregated ("bussed") and for those who remained in segregated schools ("non-bussed"). In their well-designed study, Felice and Richardson sought to examine the effects of desegregation on Anglo and minority dropout rates for bussed and non-bussed students. Independent variables of teachers' expectations of minority students and socioeconomic composition of the schools were also studied as correlates of dropout rates. The major findings of the study were:

a. For Anglos, the dropout rate in 1975 was 5.0% for students attending schools in bussed sectors and 6.4% for students enrolled in schools in the non-bussed sectors, indicating desegregation had no deleterious influence on Anglos.

b. For Blacks and Mexican Americans, the 1975 dropout rates were 10.8% and 13.5%, respectively, for bussed students, and 6.2% and 10.5%, respectively, for non-bussed students. This indicated that desegregation might have had adverse influence on minority dropout rates.

c. Teachers in higher socioeconomic composition schools held significantly more favorable attitudes toward minority student ability and academic effort.

d. Dropout rates for Blacks and Mexican Americans in 1975 were significantly higher in low socioeconomic schools when compared to high socioeconomic schools.

e. With socioeconomic composition of school and teachers' expectations controlled, the highest dropout rates for bussed minorities in 1975 were seen in low socioeconomic composition schools where teachers held low expectations of minorities. On the other hand, the lowest bussed minority student dropout rate occurred in high socioeconomic students where teachers had high expectations.

In summary, the Felice and Richardson (1977a) investigation provides valuable insight into the issues of postdesegregation retention. It appears that the uneven experiences in dropout rates of bussed Blacks and Mexican Americans resulting from desegregation could largely be accounted for by the climate of the receiving school. That is,

> The benefits of bussing to achieve school desegregation and a more proportionate racial-ethnic balance are conditional upon the socioeconomic climate and the climate of teachers' expectations of the school to which minority students are bussed. If minority students are bussed to high socioeconomic climate schools with favorable expectations held by the teaching staff,

the result appears to be a greatly reduced dropout rate.[87]

More of the issue of school climate and minority retention in the Castro case will be discussed later.

## School Closure Transition Research

The third type of school transition research discussed and admitted as evidence at the Castro hearing was my research dealing with the Angeles school closure case in Santa Barbara, California (Valencia, 1980, in press). In 1979, the Santa Barbara School District, like other districts throughout California and the nation, faced the previously described interrelated problems of inflation, fiscal cutbacks, and declining student enrollment. Utilizing a number of criteria (e.g., operational costs, ethnic and socioeconomic segregation), the District evaluated its 11 elementary schools for closure conduciveness. Five of the 11 schools had high density Chicano enrollments (greater than 50%), and six had high density Anglo enrollments. The three schools selected for closure were Chicano.

Subsequently, a number of Chicano parents, representing their plaintiff children, sued the District, charging that the closures of three Chicano schools, no Anglo school closures, and the "one-way bussing" scheme of Chicano students to Anglo schools were illegal, arbitrary, and discriminatory under the California and Federal Statutes and Constitutions. I, who was one of four expert witnesses, testified in the Angeles case on the potential educational and psychological effects of the closures on the dispersed minority children. My testimony was based on theoretical and empirical bases related to the historical circumstances of the Chicano schooling experience, home-school continuities and discontinuities, cognitive dissonance, school stress, psychological reactions to stress, and the climate of the receiving schools. In short, I testified that given the school closure circumstances, the dispersed Chicano children were generally more likely to experience an increase in psychological disturbances and academic failure.

After two weeks of trial in mid-August, 1979, the Superior Court judge ruled in favor of the defendants, concluding that the District's plan to close the targeted schools was legitimate and showed no racial discrimination.[88] In the fall of 1979, three inner-city Chicano schools were closed, and approximately 600 Chicano elementary grade children were dispersed among five predominantly Anglo schools.

About 1-1/2 to 2 years after these closures, I collected interview data on 50 Chicano families affected by the closures (Valencia, in press). The purpose was to study the negative impact hypotheses I predicted two years earlier at the _Angeles_ trial. The follow-up study sought to gather data concerning four major hypotheses:

a. The dispersed Chicano children would generally experience serious psychological adjustment problems.

b. The children would experience declines in their academic achievement.

c. The parents of the children would experience sharp declines in parental involvement activities in the receiving schools.

d. The parents of the children would perceive the closures as having an adverse effect on the Chicano community.

The respondents for the follow-up study were 50 Mexican American mothers randomly selected from the closure population of about 300 Chicano families (this sample size represented one-sixth of the affected Chicano population). The sample was characterized as generally Spanish-speaking, born in Mexico, with an average neighborhood residency period of seven years, and of working-class background. The affected children were predominantly English-speaking and bilingual, nearly equal in number of boys and girls, nearly equal in proportions from kindergarten through grade four at the time of closure, and enrolled for an average of nearly three years at the closed schools.

Based on interview data from a series of 23 closed- and open-ended questions, four major conclusions were drawn from the results:

a. Generally speaking, the four hypotheses (adjustment, achievement, parental involvement, and overall impact) appear to be confirmed.

b. A substantial proportion of the parents and their children were adversely affected.

c. Competing explanations for the adverse effects have been investigated and subsequently dismissed because of statistically nonsignificant findings. Therefore, the adverse impact is a global effect, relatively independent of school, respondent, and child characteristics.

d. Notwithstanding the absence of statistically significant relations between child characteristics and adverse effects, there are data that indicate certain trends. In the case of our scarce but developing knowledge base on school closure impact, it appears that children who have less congruent home-school experiences, older children, and females may be more likely to experience adverse effects from the disruptions of school closures.[89]

Furthermore, I offered this conclusion of increased risk of school problems:

> Based on the empirical data provided in the present study, it appears that the negative settling effects brought on by the

> closures have already begun to take hold. It can be said with some sense of certainty that for a substantial percentage of the affected Chicano student population, an already high probability of school problems and failure has been increased.[90]

In summary, the three previous sections on normative-, desegregation-, and school closure-related research, along with the notion of minority students being "at risk", laid the theoretical and empirical foundations for my hypotheses of potential effects in the *Castro* case. However, before these effects are described, it is important to identify and discuss another vital element, the social structure and social climate of the receiving school.

## The School Climate at Central High

As stated earlier, a major outcome of the closure of Phoenix Union was the desegregation of Central High School. That is, under the District's open enrollment policy, a significant percentage of Phoenix Union's 95% minority enrollment and East's 67% minority enrollment decided to enroll at Central for the 1982-83 school year. Based on preregistration figures, Central's minority enrollment would dramatically increase from 18% to 42%. The primary reason Phoenix Union and East minority students chose to enroll at Central after the closure of their respective schools was because Central was the nearest high school to the students' homes.

School climate research, a stepchild of organizational climate and school effects research, has become a major and separate area of educational inquiry (Anderson, 1982). An offshoot of general school climate research has been the theoretical, empirical, and applied work concerning the climate of desegregated schools (e.g., Cohen, 1980; Gerard & Miller, 1975; St. John & Lewis, 1975; Rosenfield, Sheehan, Marcus, & Stephan, 1981). Rosenfield et al. (1981) have identified two general focuses for such work: social structure of the classroom (e.g., percentage of each ethnic group, and social stratification with respect to status aspects) and social climate of the class (e.g., teachers' attitudes and expectations toward different ethnic groups, power relations, and learning structures).

In the Castro case, as in the Angeles case, a highly significant variable was the nature of the receiving school, particularly its preparation, attitudes, receptivity, and goals for the incoming minority students displaced by the closures. During the Castro hearing, a considerable amount of testimony was presented by witnesses for the defendants and plaintiffs with respect to the anticipated interethnic experiences, schooling activities, and educational outcomes for minority students. Based on my exhaustive reading and interpretation of depositions and listening to testimony given by several witnesses for the defense, the following were my impressions of the defendants' views of Central High School:

a. Central was the number one school in the District in academic achievement. It is a school with a national reputation for academic excellence.

b. If the minorities from Phoenix Union were placed in a high achieving environment (Central), they would become more competitive, and thus increase their achievement. This expectation was based on some testimony that teachers at Phoenix Union were "not imparting knowledge to the students," and "students were not motivated", "indifferent to education," "didn't live up to their potential," and thus were "low achievers." In short, Central would provide a better learning environment for the minority students from Phoenix Union. Likewise, the minority students already enrolled at Central were achieving at extremely high levels, exemplifying Central's excellent academic impact on minorities.

c. The minority dropout rate might increase in the short run, but not in the long run because Central's was a more favorable environment.

d. No major interethnic problems were to be expected.

e. There would be no tracking or resegregation of Anglos and minorities in the Alpha, Beta, and Gamma courses, indicating that student enrollment distributions by ethnicity in various courses would be nonbiased and would reflect the percentages of minorities and Anglos in the general student body.

f. The increase of Central's enrollment from 2,044 students to 3,200 (a 58% increase) would not create any major problems in school management.

g. The in-service workshops to prepare Central teachers for the large influx of minorities were essentially adequate in quality and quantity.

In summary, the preceding general perceptions of Central's climate according to the defendants appeared to be anchored in the common sense assumption that minority students who are low achievers would achieve at higher levels in a school environment that provides greater learning opportunities. In the context of theoretical desegregation work, this assumption is sometimes referred to as "lateral transmission of values" (Gerard & Miller, 1975). The core of this assumption is that the poorer achievement of minority children largely stems "...from a motivational or value deficit and that entry into the majority 'Anglo' classroom would somehow reduce or compensate for that deficit."[91] The problem with this assumption is that desegregation research has often failed to support it (e.g., Gerard & Miller, 1975). Also, the existing research that has attempted to study the hypothesis that desegregation shortens the minority-Anglo achievement gap is inconclusive (e.g., St. John, 1975, 1981). The defendants ignored these research studies and made no mention of empirical work on the lateral transmission of values assumption. In addition, the defendants totally ignored the research previously cited by me on desegregation (school stress and anxiety, normalization of instruction and grades, and postdesegregation retention rates). No mention was made either of the desegregation work on school climate. It was clear that the defendants' testimony on claims of salutary effects for minorities from Phoenix Union who would be attending Central was also completely devoid of empirical justification. Thus, it was very important for me to ground my perceptions and testimony regarding the social structure and social climate at Central in the available literature base in order for the court to understand the potential harm or benefits for the dispersed minority students. This analysis is discussed next.

## Potential Effects

Before I present my major conclusions about the potential effects of the closure and displacement on the Phoenix Union minority students, it is necessary to give an interpretation of the anticipated climate at Central High. This interpretation is in sharp contrast to the picture presented by witnesses for the defense.

The Issue of Teacher Attitudes. One of the most significant variables believed to influence students' academic achievement are teachers' attitudes, particularly expectations, toward a given student. It has been found that student characteristics in the area of personal and group membership attributes are very likely to influence teachers' perceptions and subsequent interactions with students (Brophy & Good, 1974). In the case of social class and race, there is ample empirical evidence that students from low socioeconomic and/or ethnic minority backgrounds are typically perceived by their teachers as having limited ability, low motivation to achieve, and behavioral problems. In addition, this body of literature has consistently reported that teachers tend to have less favorable interaction patterns with students from low socioeconomic and/or minority status, than with middle-class Anglos (e.g., Datta, Schaefer, & Davis, 1968; Leacock, 1969; Miller, McLaughlin, Haddon, & Chansky, 1968; Rist, 1970; Rubovits & Maehr, 1973; U.S. Commission on Civil Rights, 1973; Yee, 1968). Recently, a literature review of teachers' attitudes toward Black students has noted similar findings in desegregated settings (Robinson, Robinson, & Bickel, 1980).

Was there evidence in the Castro case that the Central high teachers held such attitudes toward the incoming minority students? Yes.

One document that was particularly important for me in the development of testimony was an exhibit entered by the plaintiffs.[92] This document was a memo from Central's principal to the Central staff and faculty. The memo was a summary of a half-day in-service workshop attended largely by Central's teachers. The participants were asked to meet in small groups to express their thoughts on these three questions: "What are your expectations for the opening of school next year?" "What are your feelings about the changes in student and staff population for Central High?" "What can be done to make the expected changes better?"[93] These summary quotes from the large group meeting (which followed the small groups) reflect some collective concerns, expectancies, and dispositions:

- "Fear was expressed related to physical violence expected as directed toward staff and students" (sic).
- "Confusion as to what to expect from students new to the Central campus."
- "Attendance and tardy policies will be tested."
- "The number of 'no shows' will increase."
- "'Turfism' will become a greater problem."
- "There will be a temptation to 'lower standards' in academics, behavior, and campus appearance."
- "Ethnic miscommunication will create potentially disruptive situations."
- "Feelings of alienation and anger will lead to drop outs among new students."
- "Confrontations of various kinds will lead to the voluntary withdrawal of many students."
- "Established student groups such as pom, cheer, student government, and jocks will feel threatened by 'new' students."
- "Graffitti will be more evident."[94]

A second document, entered as evidence by the plaintiffs and used as a reference for my testimony on school climate, was a summary report of a five day in-service held for Central High teachers in the summer of 1982.[95] One of the five workshops was entitled "Phoenix Gangs," and it was led by the Phoenix Gang Squad officers. In addition to suggestions by workshop leaders for "things to do at Central to prevent gang problems," such as "break up groups," "paint out graffitti immediately," and "don't allow them to wear their colors (hats, bandanas....),"[96] a booklet was also passed out to workshop participants entitled Strategies for Reducing Violence on the School Campus (Brooks, 1981).

Another point of reference I used as testimony regarding attitudes toward the incoming minority students was a report on one of the above workshops, called "Multiethnic Considerations in the Classroom." The summary noted:

> A review of current research on teacher effectiveness in inter-racial classrooms (*sic*). Different cognitive teaching styles are helpful as students of Black and Mexican-American heritage generally appear to have different learning styles from most middle-class white students. Learning styles run on a spectrum from field dependent to field independent. Field dependent learners do better learning in social, verbal, externally reinforced and structured situations.
>
> Field independent learners learn well in situations which are more analytical, written, and can provide their own reinforcement and structure.[97]

My testimony on the teachers' attitudes that emerged from the "feelings" and "expectancies" in-service and on the references in the workshops to "gangs" and "learning styles" centered on the point that pejorative stereotypes of and harmful attitudes toward the minority students had been set in motion prior to the students' matriculation at Central. This testimony was grounded in theoretical and empirical work in which initial expectations of teachers (expectations that are inaccurate and rigid) can directly influence teacher-student interaction patterns resulting in behavioral confirmation and the perpetuation of a vicious self-fulfilling prophecy.[98] That is, for example, if the Central teachers held inflexible and incorrect expectations that the incoming students were poorly motivated, then teacher interaction patterns could conceivably materialize (e.g., giving up on students who have academic problems; looking for academic deficits) that would lead to increased problems in achievement. If motivation to achieve diminishes among the minorities, such behavior will then confirm the teachers' initial expectation and the cycle is perpetuated.

With respect to the workshop on gangs, it seemed likely that a stereotype about minority students being gang members was implanted or reinforced among the teachers. This seemed especially likely since an entire workshop day had been devoted to a problem that involved only a small number of minority students.[99] And since 90% of all Phoenix gang members were Chicano, it is conceivable that a large number of entering Chicano students would be stereotyped as gang members or potential members.

Concerning the workshop on field dependent and field independent learning/teaching styles, I presented testimony that such pedagogical recommendations for different teaching styles for Black and Chicano students actually stereotypes and unfairly pigeonholes them. Furthermore, as I testified, a substantial body of empirical work has failed to support the hypotheses that field dependence - field independence learning styles are good predictors of academic achievement and that they distinguish minority from Anglo students (e.g., Figueroa, 1980; Figueroa & Gallegos, 1978; Kagan & Buriel, 1977; Nelson, Knight, Kagan, & Gumbiner, 1980).

In summary, there appeared to be ample evidence that the attitudes held by Central teachers and the workshop information imparted to them were generally unfavorable, negatively stereotypic, and stigmatizing in nature. Since the climate of a school in a desegregated setting is a critical factor for successful integration (Hughes, Gordon, & Hillman, 1980), particularly in the area of teacher expectations (e.g., Felice & Richardson, 1977a), it was extremely likely that a large number of minority students would experience serious psychological and educational problems at Central.

The Issue of Academic Excellence of Central High Minorities. As noted previously, it was testified by witnesses for the defense that Central High, an 82% Anglo school, had an outstanding, even national reputation for its academic excellence. This was supported by the District's comprehensive achievement testing records, which consistently showed Central among the top schools in academic achievement. Was there evidence as to how well minorities achieved who were already enrolled at Central (i.e., before the school closure)? This was an important question for the defendants to address because if evidence could be produced that minority students at Central (compared to the general, Anglo student body) also excelled at high levels of achievement, then the defendants could argue that incoming minority students from Phoenix Union would also very likely excel in achievement.

Upon cross-examination, the defendants' lawyer showed me a series of exhibits that compared the academic achievement of Chicano students attending Central to the achievement of Chicano students enrolled at

Phoenix Union. The achievement data were the California Achievement Test (CAT) scores for the 1980-81 year. It was clear from the comparisons that the Chicano students at Central were achieving at or above national norms compared to the Chicano students at Phoenix Union, who were achieving considerably below national norms. The lawyer's point was that Central was providing an excellent learning environment for minority students. I stated that there might be competing hypotheses for the high academic achievement of Chicano students, but was not allowed to develop this point until re-direct by the plaintiffs' lawyer. The competing hypothesis I advanced was that the Chicano students enrolled at Central, compared to Phoenix Union's Chicano students, were probably of higher socioeconomic status background. Given that socioeconomic status is positively correlated with achievement, it was very conceivable that social class differences were largely accounting for the big differences in achievement between the Chicano students attending Central and those at Phoenix Union.[101] I prepared an exhibit that gave some credence to this hypothesis.[102] This table compared the relation between CAT mean grade equivalency of Chicano twelfth grade students from all 11 schools to the percentage of Chicano students attending each school who were residents of Anglo school attendance areas. The assumption was that Chicano students residing in Anglo school attendance areas were of higher socioeconomic background than Chicano students residing in minority school attendance areas.[103] Thus, residential attendance area was assumed to be a proxy for socioeconomic status. I also assumed that under the District's open enrollment policy, Chicano students living in Anglo school attendance areas would usually go to the nearest school (Anglo) or one of the other nearby Anglo schools. This latter assumption appeared sound based on a school-by-school comparison. For example, Alhambra, a very high Anglo enrollment school with high achievement levels, had 250 Chicano students enrolled in grades 9-12 in 1980-81. Of the 250, 195 (78%) were from the Alhambra attendance area, a predominantly high socioeconomic, Anglo residential area; 33 (13.2%) were from other Anglo school attendance areas, and only 12 (8.8%) were from minority school attendance areas. The same pattern held for the rest of the five Anglo schools, including Central where the majority (54%) of its 113 Chicano students were residents of Anglo school attendance areas. Regarding the five minority schools, the pattern was also clear. Chicano students enrolled in minority schools were overwhelmingly from minority school attendance areas. Likewise, the percentages of Chicano students enrolled in minority schools from Anglo school attendance areas were typically low (e.g., Hayden, 3.9%; Phoenix Union, 0.6%; South, 0.0%).

In conclusion, the exhibit I prepared and entered as evidence by the plaintiff's lawyer showed a statistically significant and positive rank order correlation between CAT scores of Chicano students at the 11 schools and the percentage of Chicano students at each school who were residents of Anglo school attendance areas. This strong relation indicated that social class differences among the District's Chicano students was probably a very influential factor related to their variability in academic achievement. Without taking this into consideration, the defendants' blanket claim that Central's fine academic track record with minorities insured high achievement for the minority students from Phoenix Union was tenuous.

The Issue of Tracking. Tracking, an extreme form of ability grouping, occurs when a student is assigned to a track of instruction with other students of alleged similar ability. Thus, under such circumstances a school is likely to have a stratified and hierarchical structure in the delivery of instruction, particularly in a diverse student body. In this respect, Brophy and Good (1974) note:

> The effects of student achievement differences on teachers are magnified when the school uses a tracking system. . . students in the high track are likely to be from high SES homes, which usually means preferential treatment in the teacher assignments and resource allocations made by school administrators. . . the tracking system insures that the highest achieving children are likely to get the best education that the school system has to offer, while the low achievers are likely to get the worst. Over time this factor alone is liable to increase the differences between the two groups of children.[104]

This contention and related empirical literature (e.g., Brophy & Good, 1974; U.S. Commission on Civil Rights, 1974) raise critical issues about the potential denial of equal educational opportunity for some groups of students, particularly those of low socioeconomic status minority background.

On the issue of tracking at Central High, a witness for the defendants testified that the percentages of minority and Anglo students enrolled in all the school's courses reflected the respective percentages of minorities (42%) and Anglos (58%) in the student body. Thus, no racial bias in class assignments, hence tracking, was evident. This contention was based on a computer printout of 1982-83 preregistration figures in which course-by course enrollments were listed by ethnicity.

The flaw in the defendants' contention of ethnic parity in course enrollments was that the evidence presented at testimony reported only aggregated data {Anglo vs. minority percentages for all combined courses, regardless of subject area (e.g., English) or type (e.g., Alpha)}. Because of the extremely sharp differences in academic achievement between the Central students and the incoming minorities and the existence of certain prerequisites necessary to enroll in the various courses, it was my belief all along that there would be serious academic resegregation at Central. To support this contention, I did an exhaustive analysis of the preregistration data. In a series of exhibits, tabular data were presented for Anglo vs. minority enrollment across grade (9-12), subject area (English, mathematics, science, and social studies), designation (Alpha, Gamma, and Beta), and curriculum type (remedial, basic, less advanced, advanced/ college preparatory, and special).[105] The major result of this analysis revealed that minority students were overrepresented in remedial courses, showed parity in enrollment in basic courses, and were underrepresented in advanced/college preparatory courses. For example, in mathematics courses, 228 students were preregistered for remedial courses. Of these, 61 (26.6%) were Anglos and 167 (73.4%) were minorities. This meant that minorities were overrepresented by 73.1%, compared to their overall student body enrollment presence of 42.4% [106] For the 939 students enrolled in basic mathematics courses, 421 (44.8%) were Anglo, and 518 (55.2%) were minority, indicating a minority overrepresentation of 30.2%. Finally, regarding the 1,047 students enrolled in advanced/college preparatory courses, 748 (71.4%) were Anglo, while 299 (28.6%) were minority, a minority underrepresentation of 67.5%. This similar pattern was also observed for courses in English, science, and social studies. Therefore, in contrast to the defendants' claim that tracking or ability grouping by ethnicity would not be practiced at Central, it appeared that in fact a form of ethnic resegregation by ability was extremely likely to occur. Clearly, this "dual" educational system at Central raised serious issues of equal educational opportunity.

The Issue of Systemic Flux. As stated earlier, Central's anticipated enrollment for 1982-83 was to increase sharply by 57%. The 1981-82 enrollment of 2,044 would rise to about 3,200. This 1000 plus increase in enrollment would be predominantly minority students from East and Phoenix Union, the two schools closed during the 1981-82 year.

When a school enrollment increases by about 20% in a given year, some problems of management can be expected. However, if a school's student body increases by over 50% (as it would at Central), the entire social system is bound to be in flux.[107] With such a huge number of students creating a crowded situation, critical problems arise concerning how the school is going to insure the delivery of appropriate counseling and teaching services.

The normative school transition research provides us with clues to how the issue of systemic flux influences a student's adjustment during the transition to high school. For example, school transition researchers Felner et al. (1982) have explained:

> One feature of the school setting which may exacerbate students' difficulties in coping with the transition into high school is that the entire local social system is in a state of flux with all incoming students (generally from several different "feeder" elementary or junior high schools) attempting to adapt to the new setting at the same time. All students in the entering class are simultaneously confronted by a new physical environment and a larger and generally unfamiliar set of peers and school personnel. Such broad systemic flux may interfere with a student's adaptive efforts in several ways. A student's mastery of transitional tasks, such as gaining an understanding of the

> school's expectations and regularities (Bogat et al., 1980) or reconstructing and reorganizing his or her formal and informal support systems (Dohrenwend, 1978; Felner et al., 1980) may be made more difficult by the social setting context. Similarly, teachers and guidance staff are confronted with getting to know and providing information and support for large numbers of new students. Thus in addition to those tasks typically confronted by a student transferring into a new school, the students entering high school are also confronted by a less stable, less predictable environment in which resources available to aid them in their coping efforts may be seriously taxed.[108]

It should be kept in mind that this statement refers to normative school transitions. Under such circumstances, a school's enrollment increase, if any at all, would be far less than the 57% increase at Central. Therefore, the issue of systemic flux and its impact on students' adjustment is surely magnified in such a case as that of Central High.

In addition to the literature base on systemic flux, there was supporting evidence for potential problems due to the great increase in Central's enrollment. At the previously described in-service on "feelings" and "expectancies" attended by Central teachers, the following concerns in the form of summary statements were raised:

- "Anxieties are developing around the sharing of facilities, equipment, materials, and space."
- "Stressed when considering the massive changes expected."
- "There will be overcrowding of all areas of the campus."
- "Parking will be a serious problem as to space and security."
- "Students will not be generally as well equipped, with learning materials, as in the past."
- "Student aide personnel will be swamped."
- "Accountability in shared work spaces will be a problem."
- "Campus security in all areas will be difficult."
- "Schedule changes will create more problems than usual."
- "The closeness and consistency of the faculty will deteriorate."
- "Emergency plans will not be in place."

- "Communication with parents will be difficult."
- "All school services, i.e., bookstore, cafeteria, attendance office, I.M.C., etc, will be strained."
- "Teacher work and rest areas will be limited."[109]

It appears that Central's teachers were extraordinarily preoccupied with the issue and consequences of the large increase in the size of the student body.

In conclusion, I testified that given the tremendous problem of flux, the most likely students to be harmed would be the marginal students (e.g., low achievers, students with attendance problems).[110]

The Issue of Distance From Home to School. A final aspect of school climate that became a focal point of testimony by witnesses for the defendants and plaintiffs was the increased distance for Phoenix Union students from their homes to their new school, Central High. It appeared that the increase from home to school for students would range between 3 and 11 miles. The issue at the Castro hearing was whether the increased distance would create an undue burden on the displaced minority students from Phoenix Union.

Students in the PUHSD are not provided bus transportation by the District. Therefore, a large number of students rely on Phoenix's public bus transportation system to get from home to school and back. For those students who come from economically disadvantaged families, the District does provide reduced price or free bus tickets. The District was able to arrange revised bus schedules and routes for the 1882-83 year to accommodate the students from the Phoenix Union attendance area who desired bus transportation to and from Central. The nature of these revisions was testified to at some length by a witness for the defendants. In brief, the defendants' position on the increased distance was that given the new bus schedules and routes and a liberalizing of the criteria for the reduced/free bus ticket program, the students from Phoenix Union would not face any serious problems due to the increased distance.

In contrast, the plaintiffs contended that indeed they would suffer grave burdens. Relying on my research in the Angeles school closure case, the plaintiff's depositions and testimony, and interviews with several plaintiffs, I testified that the increased distance from home to school for the Phoenix Union students would generally create serious problems. My major contention was that the increased distance would result in significant "changes in life styles," mostly disruptive and deleterious, for a sizable portion of the affected students. For example, based on interviews with several plaintiffs (parents and students), it was noted that before the closure of Phoenix Union, students typically awoke at 7:00 a.m. in order to prepare for school. However, to get ready for Central, students would need to awake about 6:00 a.m. The life style changes accompanied by this earlier awakening time appear trivial on the surface, but it is vary conceivable that such changes could have far-reaching effects. I testified that getting up one hour earlier and the chronological and psychological lengthening of the day could possibly influence one or more of the following: the time a students goes to bed the previous evening (in turn cutting into time for homework), the parent's awakening time in the morning (possibly affecting their energy level for the day), family gatherings at meal times (i.e, influencing the social function of meals), and student's participation in athletics or other extracurricular activities (i.e, problems of finding transportation home after basketball practice.). I also testified that because adolescence is a developmental period in which teenagers require considerable rest because of great energy expenditures and growth spurts, it is important that students get ample sleep.

Finally, the relation between increased distance form school and extracurricular activity participation was highlighted during my testimony. I noted that Darden and Jacob (1981), in a study of minority student participation in extracurricular activities following rapid shifts in schools' racial composition brought forth by desegregation mandate, found lower participation rates for minority students in such schools. The significance of this study was twofold: (a) extracurricular activity is positively associated with long-range educational attainment, and (b) there are negative associations between extracurricular participation and truancy, suspension and dropout rates. One could hypothesize that if lower minority extracurricular participation rates are seen in desegregated settings, the rates could become even lower in such settings if the distance from home to school is perceived as an obstacle.

Summarizing up to this point on the potential effects on minority students from Phoenix Union who matriculated at Central, I researched and developed testimony on the climate of the receiving school in the five areas of: teachers' attitudes, academic excellence of Central minorities, tracking, systemic flux, and distance from home to school. The rationale and importance of this approach stems form the desegregation literature in which the quality of contact has been deemed to be most critical when students of varying ethnic, social class, and academic backgrounds are brought together under the same roof of a school. In addition to my interpretation of the climate of Central, I also drew heavily from the notion that minority students are typically a high risk population for having school problems. The other major feature of the preceding analysis was the presentation of theory and empirical research in the three areas of normative school transitions, desegregation, and school closures.

What conclusions did I present in court regarding the plaintiff's claims that the dispersion and displacement of the Phoenix Union minority students were racially discriminatory in impact and effect? After 200 hours of intensive research and participation in the *Castro* case, my major conclusion was that the minority students would be irreparably harmed both psychologically and academically. *In short, their opportunities for equality in education would be severely thwarted.*

Before these psychological and academic conclusions are specified in detail, a caveat is in order. As discussed several times in this monograph, the minority (Black and Chicano) student population is a high risk group compared to their Anglo peers, high risk meaning a higher probability of experiencing school problems and school failure. However, Black and Chicano students are heterogeneous groups. They vary in group membership attributes (e.g., social class) and personal attributes (e.g., self-esteem, motivation to achieve, coping mechanisms). Thus, even in the notion of high risk with respect to minority students, it is important to consider the idea of "marginality." That is, students from high risk populations, because of certain group and personal attributes, tend to be more vulnerable (or marginal) to schooling difficulties. In more general terms, the literature tells us that certain attributes appear to be related to the varying degrees of school success and failure among all students. Some of these major variables include: ethnicity (e.g., U.S. Civil Rights Commission, 1971-74), social class (e.g., Yee, 1968), sex (e.g., Carter, 1952), self- esteem, (e.g., Power, 1971; cited in Brophy & Good, 1974), and language (Brown et al., 1980). Other variables include such aspects as prior history of school mobility (e.g., Felner et al., 1981) and attendance rates (U.S. Department of Health, Education, and Welfare, 1975). In short, the prognosis for success or failure for students in a given school is influenced by group membership, personal attributes, and personal school history. Also important, as discussed in this monograph, is the climate of the school. In the Castro case, I testified that the most marginal minority students from Phoenix Union attending Central would likely be students who were achieving at low levels, had low self-concepts, had histories of attendance problems, were from lower socioeconomic backgrounds, and had little contact with Anglos. The psychological and academic consequences of these predicted adverse effects are described next.

Psychological Effects. Given all the evidence discussed up to now, it appeared quite probable that Phoenix Union's marginal students would experience some serious, even incapacitating, psychological adjustment problems related to the transition. An important substantiation for this contention was the research which found a higher rate of adjustment problems experienced by minority students during normative transitions and a higher rate of school stress and anxiety experienced by minorities in desegregated settings. If I had relied solely on these empirical studies to support my hypothesis of psychological maladjustment, admittedly this would have raised questions of speculation. However, given the major problems related to Central's climate, particularly the issues of teachers' attitudes toward the incoming student, systemic flux, and the depositions and testimony of plaintiffs in which parents and students appeared to be preoccupied with ethnic/social class distinctions in dress, language, and culture, serious adjustment problems seemed imminent. In summary, I testified that the healthy socioemotional development of many minority students would be in jeopardy under the circumstances. Furthermore, normal and healthly socioemotional behavior and development appears to be a vital influence on, perhaps even a requisite for, sound academic progress (e.g., Henderson, 1980).

*Academic Effects*. The second major aspect of my hypothesis of adverse effects dealt with academic outcomes. It was my conclusion that the anticipated schooling experience would generally be harmful for a substantial number of the marginal minority students at Central. These deleterious effects would materialize in three areas. First, because of the expected tracking and two-tier curriculum in which minorities would be substantially overrepresented in remedial classes and underrepresented in advanced/college preparatory classes, there was expected to be considerable curricular stratification between minority and Anglo students. Such a separation would result in barriers to equal educational opportunity for the minority students. I testified that resegregation on intellectual grounds is just as invidious as segregation on racial grounds.

Second, for those minority students who do enter mixed classrooms (lower-achieving minorities with higher-achieving Anglos being the most typical situation), the normalization of instruction of grading phenomenon was likely to be operative. That is, as previously discussed in detail, teacher-assigned grades tend to be normalized in relation to the mean of the particular class. This often results in a decline in grades for minorities and spurious improvements for Anglos. Also, as discussed earlier, the motivational consequences of the normalization phenomenon can be disastrous for minorities.

The third aspect of harmful academic effects likely to be experienced by some minority students would be an increase in the dropout rate. Perhaps because the high dropout rate of Blacks and Chicanos is widely substantiated and acknowledged, this aspect captured the interest of witnesses for the defendants and plaintiffs, and the judge. My testimony on the probability of an increased dropout rate among minorities was structureed in such a fashion that all my previous testimony on the issue of impact (e.g., at risk, transition adjustment, stress and anxiety, teachers' attitudes, postdesegregation retention research, systemic flux) was brought to bear in order to clarify the potential retention problem for the court. When all this evidence was integrated, it appeared that an increase in the minority dropout rate was imminent, especially in light of the fact that there was a history of high dropout rates among Blacks and Chicanos at Phoenix Union. For example, in 1980-81, the Chicano dropout rate at Phoenix Union was 36.8% (the highest Chicano dropout rate of the District's 11 schools), and for Blacks the dropout rate was 20.0% (the second highest of the District's schools).[111] Thus, because of the vulnerability of Phoenix Union's minority students to retention problems, I testified that any condition deemed to be obstacles resulting from the closure of the school and the subsequent displacement of the students, would increase the already high dropout rates for these students.

In conclusion, this quotation by St. John (1981) on the issue of racial mixing gets to the heart of the Castro case and potential impact:

> Whether for children of either race the benefits outweigh possible harm seems to depend on how desegregation is accomplished in schools-- on the leadership given by the principal, on a teaching staff that is unbiased and trained in ways of handling diversity in the classroom, on the cultural pluralism of the curriculum, and--above all--on equality of status for each racial group within the school. A school with these assets might be called truly integrated.[112]

In the Castro case these critical ingredients for success-- institutional support directed for positive outcomes, a sensitive teaching staff, common goals, and equal status--were generally absent.

# CONCLUSION

My intent in this concluding section is to raise and discuss the policy implications for equal educational opportunity that resulted from the Castro case. This final section comprises three parts. First, there will be a presentation of the judge's ruling. Following this, there will be a discussion of the legal and educational implications of the Castro case. Finally, a very important epilogue will be noted.

## The Judge's Ruling for Injunctive Relief

After nine days of listening to testimony in August, 1982 at the Castro injunctive relief hearing, the judge filed his Memorandum of Findings and Order on August 30, 1982. The next day, the Phoenix Gazette blurted a front page headline, "Judge rules PUHS must be reopened." [113] The judge ruled that the closing of Phoenix Union was discriminatory and had a negative impact upon the plaintiffs' rights to an equal educational opportunity. His order included a number of points, including this granting of relief:

> ...That plaintiffs' motion or petition for preliminary injunction is granted, and the defendants are hereby enjoined from leasing, selling or otherwise disposing of the property of Phoenix Union High School, consisting of the realty and improvements thereon...... The defendants, effective the first day of the second semester of the 1982-83 school year, are enjoined from closing Phoenix Union High School....This order will continue in full force and effect, pendente lite, or until the District has sooner considered and is prepared to put into effect and alternate plan which would fairly implement the constitutional and legal principles involved herein....[114]

Regarding impact, the judge found that "There is evidence that there would be substantial negative impact on the minority students and their parents."[115] Largely, his findings centered on negative impact in the areas of distance, achievement and retention.

Regarding distance, he found:

> The students in many instances will be compelled to take a bus for much greater distances than before. . .some are being compelled to expend money for bus fare; almost all students are far from walking distance to and from school; all must be up earlier than before; many because of the bus schedules are precluded from some extracurricular activities and athletics. The minority student is therefore being subjected to burdens which are not being imposed upon the non-minority student.[116]

With respect to achievement, the Judge's findings were:

> Because of the large sudden influx of minority students into Central High School and the fact that in general they scored lower in achievement tests they will be subjected to the "normalization of the instruction phenomenon" wherein it is expected that minorities will generally be receiving lower grades than the majority students at the receiving schools.[117]

Concerning the retention issue, he found:

> There is a probability of an increased in the dropout rate. At the present time more than 50 students from Phoenix Union High School have not enrolled with a further expectation that those that did enroll, an additional number will drop out.[118]

## Legal and Educational Implications of the Castro Case

**Legal Implications.** As discussed previously, the plaintiffs' legal strategy had two important aspects: evidence of racially motivated intent and evidence of adverse racial impact. In my opinion, the transpiration and outcome of the Castro case shed considerable legal light on these two issues of racial discrimination.

With respect to intent, the major point I attempted to develop in the first half of this monograph was that the supposedly objective criteria the District used for closure conduciveness were, in reality, inherently biased against minority schools and biased in favor of Anglo schools. Thus, the a priori decision making characteristics of the criteria, as I testified in great detail, were of such a nature that the legal finding of bias proved critical in the eventual outcome of the case. Therefore, in future school closure lawsuits of this type, I recommend that the plaintiff scrutinize closure conduciveness criteria for indices that appear to predispose certain schools for closure and others for non closure. If it can be shown that the school district's closure conduciveness factors are better predictors of the ethnic enrollment percentages of schools and not necessarily of the intended criterion variable (e.g., equal educational opportunity for all students), then it is very likely that an element of racial bias may be involved in the decision-making process. Of course, this scrutiny should involve an examination of the district's educational assumptions, rationales, and empirical evidence for the inclusion of any given closure conduciveness criterion. In short, it appears that the manner in which closure conduciveness criteria are prepared and applied is a very good reflection of the possible existence or nonexistence of racial discrimination.[119] I cannot emphasize this point enough.

A fundamental claim by the plaintiffs in school closure lawsuits such as the Castro and Angeles cases focused on the notion of "burden" (Ah Tye, 1982; Valencia, 1980). To some degree, both the defendants and plaintiffs agreed in these cases that school closures represented burdens for students and their parents. However, the issues before the court were whether the alleged burdens were grave enough to have a significant negative impact on having access to equal educational opportunity and whether minority students were being forced to carry the burden exclusively. The finding in the *Castro* case regarding burden is extremely important for the advancement of school closure case law because: (a) the notion of burden became operationalized (e.g., increased distance to school negatively impacting extracurricular activity participation), (b) such burden would create constitutional violations of students' rights for equal educational opportunity, and (c) the judge specifically linked the issues of significant negative impact and exclusiveness of burden with the issue of budgetary problems. Regarding this, the court found:

> The students, parents and public expect and have a right to expect that the administration of the schools of this city will be done fairly, without discrimination or undue adverse impact to any particular segment of the student population. The law requires nothing less. The School Board is not permitted to solve its budgetary problems by acts which result in undue burdens being placed exclusively on minorities, and excluding the majority students from like burdens.[120]

To me, the policy implication for equal educational opportunity one could draw from the legal finding in *Castro* is quite clear: *in the management of contracting school systems, the burden and sacrifices had better be shared*. *Legally, anything else is unacceptable*.

*Educational Implications*. It can be said that the social sciences have four major goals regarding behavioral investigations: to describe, to explain, to predict, and to modify behavior. In the *Castro* case, an extremely important aspect I was asked to study was the prediction of the potential impact on the Phoenix Union minority students resulting from the closure and displacement.

In social science inquiry, there is no way to predict precisely what is going to occur. This was also true with respect to impact in the *Castro* case. However, the valuable literature base I reviewed along with the anticipated conditions at Central made it possible for me to identify a number of factors that could be used to predict, with a high degree of probability, whether the impact would be relatively adverse or beneficial for the students' psychological and educational development. With this in mind, it is then possible to discuss the educational implications of the *Castro* case.

One significant implication is that school closures and the displacement of students can be and should be thought of as a major *transition* for students, particularly at the secondary level. *If this is indeed an accurate assessment, then school administrators, teachers, counselors, and researchers alike will need to ground their understanding of school closure/displacement dynamics in the realms of theoretical, empirical, and preventive research on school transition.* Although the study of the nature of the transition and frequency of school closures is at a seminal stage compared to the other three types of transition (first time entry to school, natural matriculation progression from one level to another, and transfer due to family mobility), it is foreseeable that school closure transition research will become an integral part of the wider school transition research. Since school transitions place students at varying degrees of vulnerability to disturbances, it is important to locate school closure transition research under a paradigm of school transition study. This is particularly important in our urban centers because it appears that in school closure situations in a given community, the segments of the student population that are forced to carry the burden are most often inner-city working-class minorities, which are high risk populations. (Colton & Frelich, 1979; Dean, 1983; Scott, 1983; Valencia, 1980).

A second major implication resulting from the *Castro* case involves the enormous complexity of the educational issues at hand. I have emerged from my work on this case as a for more learned person about the tremendous dynamics of the teaching-learning process. I am especially impressed with the interaction between the social psychological processes of the schooling process and the structural conditions under which schooling operates. In the *Castro* case, the study of this complexity was approached by examining a number of social psychological processes (such as perceptions, attitudes, and expectations) and how they interacted with structural aspects (such as distance form home to school, ethnic mixing in classes, systemic flux). Heuristically speaking, this type of ecological approach, in which human and physical interconnections are analyzed, may prove to be useful as an investigatory format in future research of of this kind. In my mind, the implication of placing school closures within a school transition paradigm and the implication of the complexity closures create, brings forth this equal educational opportunity policy consideration: *it would behoove policy makers to be aware of the serious psychological and educational disruptions closures create for high risk minorities. This fact should be considered in developing policy and management guidelines before clo-*

sure decisions.

A third and final implication that results from this work deals with issues of desegregation. It appears that in school closure cases of this type, in which racial isolation is involved prior to closures, a likely outcome is the desegregation of one or more schools. Therefore, school closures in interracial communities (such as Phoenix, Arizona and Santa Barbara, California (the Angeles case)), have tremendous potential for positive desegregation outcomes. If desegregation is to be a consideration in closure conduciveness criteria, then it is important for school districts to prepare responsible desegregation plans that include careful consideration of issues of distance, percentage of ethnic mix, flux, teacher transfers, and one- or two-way bussing. Most importantly, the critical aspect of integration must be planned for.

In interracial, segregated communities, the closure of schools can lead to two possible outcomes regarding the problem of racial isolation: (a) the furthering of segregation by resegregating students, or (b) the desegregation of one or more schools. Obviously, the choice of resegregation of desegregation should not be a difficult one for districts to make. In the Castro and Angeles cases, the issue of reducing racial isolation did indeed become aspects of their respective plans. However, the plans were questionable on two grounds. Concerning desegregation and dispersal, the plans to move only minority students placed the exclusive burden of displacement on these students, significantly impinging on their educational progress. With respect to integration, the social psychological attitudinal process which ideally leads to the acceptance of all racial groups on equal grounds, the efforts in both the Castro and Angeles situations were token and flippant in nature.

Because of the obvious similarity between school closure dispersion of students and desegregation and because of the above shortcomings regarding desegregation and integration plans, it is not surprising that I was able to draw heavily from the desegregation literature in this monograph to shed light on impact issues in the Castro case. Finally, on this implication of desegregation and school closures, it would be in the best interest of districts who do plan to incorporate desegregation aspects into their closure to avoid the illusion that bringing together monority and Anglo students is enough. The policy implication for equal educational opportunity, in my opinion, is best exemplified by McConahay (1978) who admonishes:

> We should expect that. . . merely mixing persons of different races, social classes, and ethnic backgrounds will have very little effect on their basic attitudes. We should expect little (or even a negative) effect especially when it occurs under circumstances where the students perceive that they had little choice; where their parents, peers, and other reference groups in the larger community expect them to be negatively affected--or, at best, unaffected; and where little is done to encourage them to behave positively toward one another.[121]

In closing, I want to recall the purpose of this monograph: to share with the reader how I was able to draw upon various social science theoretical and empirical bases in order to help the court to understand the claims of discriminatory intent and impact brought forth by plaintiffs in the Castro case. Hopefully, I was able to accomplish this charge within the guidelines and by the rigorous standards of social science.

In the event of future school closures in our nation, particularly in interracial communities, perhaps the legal and educational aspects debated and resolved in the Castro case can serve as educational beacons for responsibility, equity, and foresight in such decisions.

## Epilogue

During the months following the Castro decision while the preliminary injunctive relief was in full force and effect, the PUHSD exercised its legal right to develop an alternate plan on the issue of school closures and budgetary problems that would meet the constitutional and legal principles ruled in the case. On November 23, 1982 the court accepted the plan.[122] The proposal called for the original action to close Phoenix Union High School. However, in order to solve the problem of not having a high school in the inner city to accommodate the predominantly minority student population, the District proposed to reopen North High, a previously closed minority school. North is relatively nearby Phoenix Union. Furthermore, in order to deal with the issue of burden, the District ended the open enrollment policy for the Central, North, and Phoenix Union attendance areas and made some boundary changes. It was expected that these changes would result in a sharing by Anglos and minorities of the burden of displacement to North and Central. For the 1982-83 school year, North High began operation with a freshman class of about 600 students. In each of the three following years, a sophomore, junior, and senior class will respectively be added, resulting in a four- year comprehensive high school by the 1985-86 school year. Also, it was proposed that the District would eliminate the open enrollment policy over the next four years.

To some people, this major posthearing development might mean that the victory by plaintiffs in the Castro injunctive relief hearing was a pyrrhic victory. This may be true. However, in the most optimistic sense, two points are noteworthy. First, the minority community, which predominates in population in the inner city, still has a school close by which can serve it. Second, the ending of the open enrollment policy in the affected areas is a first step in desegregating PUHSD's heavily segregated district. Under the open enrollment policy, there was a great tendency for Anglos residing in minority school attendance areas to flee to Anglo schools. These are positive aspects worth considering in light of all that has transpired.

## FOOTNOTES

1. Castro et al. v. Phoenix Union High School District #210 et al., case number CIV 82-302 PHX VAC, United States District Court, District of Arizona, Phoenix, Arizona, August, 1982.

2. Angeles et al. v. Santa Barbara School District et al., case number 127040, Superior Court, Santa Barbara, California, August, 1979.

3. R. Gillot, Cutbacks sting schools even harder this year, Santa Cruz Sentinel, August 29, 1982, p. 1.

4. P. W. Briggs and Associates, Vocational facility location study. Report submitted to Phoenix Union High School District No. 210, Phoenix, Arizona. Office of Field Services, College of Education, Arizona State University, Tempe, Arizona, October, 1981, p. 14.

5. Ibid., p. 15 and Exhibit IV.

6. C. Stovall, Santa Clara school sites rezoned; now land can be sold for homes, San Jose Mercury, June 8, 1982, p. 43.

7. Briggs and Associates, op. cit., p.5 and Exhibit I.

8. G. Orfield and P. Fischer, Housing and school integration in three metropolitan areas: A policy analysis of Denver, Columbus, and Phoenix. A report to HUD, January 13, 1981. Metropolitan Phoenix includes the communities of Glendale, Mesa, Scottsdale, Tempe, and other parts of Maricopa County.

9. Ibid., p. 111.

10. Briggs and Associates, op. cit., pp. 5-6.

11. Ibid., p. 6.

12. Orfield and Fischer, op. cit., p. 110.

13. Ibid., p. 111; Briggs and Associates, op. cit., p. 6.

14. Orfield and Fischer, op. cit., p. 111.

15. Ibid., p. 141.

16. Ibid., p. 141 and p. 146.

17. Ibid., p. 141.

18. Ibid., p. 117.

19. Ibid., p. 123.

20. Ibid., pp. 119-123, and p. 147.

21. Ibid., p. 148.

22. Briggs and Associates, op. cit., p. 13.

23. Orfield and Fischer, p. 152.

24. Ibid., p. 152 and p. 173.

25. Briggs and Associates, op. cit., p. 14.

26. Ibid., Appendix K.

27. Ibid., p. 17.

28. An analysis of criteria for school closure. Report submitted to the Board of Education, Phoenix Union High School District, November 1, 1979.

29. PUHSD Family, Spring 1982, 1 (4), 2.

30. L.M. Stewart and Associates, Investigation reports on the school closure decision by the Phoenix Union High School District. United States Department of Education, Office for Civil Rights, June 17, 1981, p. 3.

31. Ibid., p. 3.

32. Ibid., p. 3.

33. Ibid., p. 3.

34. Ibid., pp. 4-5.

35. Ibid., p. 5; An analysis of criteria for school closure. Report submitted to the Board of Education, Phoenix Union High School District, November 1, 1979.

36. Criteria Report, op. cit., p. 8.

37. Ibid., p. 7.

38. Within the PUHSD and during litigation, there was a common perception and consensus that a minority school was a school which had a minority enrollment of greater than 50%, and an Anglo school had an Anglo enrollment of greater than 50%.

39. Stewart and Associates, op. cit., p. 7.

40. Ibid., pp. 7-9.

41. Ibid., p. 10.

42. Ibid., p. 10.

43. A.M. Flores, Pre-Hearing Memorandum, August 3, 1982, p. 1. Mr. Flores, of the Phoenix law firm of Cordova, Flores, Morales, and Iniguez, was the counsel for the plaintiffs.

44. Ibid., p. 1.

45. Ibid., p. 2.

46. Honorable Valdemar A. Cordova, Memorandum of Findings and Order, August 30, 1982, p. 5. Judge Cordova was the judge who heard the *Castro*, case.

47. Ibid., p. 6.

48. See *Bryon v. Koch*, 627 F. 2d 612 (2d Cir. 1980); *Serna v. Portales Muns. Schools*, 499 F. 2d 1147 11154 (10th Cir. 1974); *Association Against Discrimination in Employment, Inc. v. City of Bridgeport*, 479 F. Supp. 101, 111 (D Conn, 1979); *Soria v. Oxnard School Dist. Bd. of Trustees*, 386 F. Supp. 539, 545 (C.O. Cal 1974); *NAACP v. Medical Center, Inc.*, 657 F. 2d 1322 (30 Cir. 1981) (enhance); *Jackson v. Conway*, 476 F. Supp.896 (E. D Mo. 1979); *Rios v. Remp*, 480 F. Supp. 14 (E.D. N.Y. 1978).

49. Flores, op. cit., pp. 3-4.

50. Ibid., pp. 4-5. For a discussion on the type of evidence generally necessary to show intent, see *Arlington Heights v. Metro Housing Corp*. 429 U.S. 252, 97 S. Ct. 555, 50 L. Ed 2nd 450 (1976).

51. The author's use of the term "biased" is meant to connote the notion of "unfairness." In this context, one can speak of how scores on some measure can be used in a selection situation which raises issues of social justice and fairness. For further

discussion of the concepts of fairness and unfairness see Jensen (1980, p. 376).

52. Criteria Report, op. cit., p. 9.

53. For example, see Carter and Segura (1979) and U.S. Civil Rights Commission (1971-1974).

54. Criteria Report, op. cit., p. 13.

55. Ibid., p.13.

56. For example, see Carter and Segura (1979, p. 176).

57. Criteria Report, op. cit., p. 16.

58. In the subsequent discussion, "teacher age" is substituted for "length of experience." This is based on the assumption that there is a very strong positive correlation between the length of teaching service of teachers and their chronological age.

59. Grambs (1980, p. 552).

60. Ibid., p. 556 and p. 552.

61. For a direct test of the hypothesis that minority teachers, in comparison to Anglo teachers, would tend to have lower mean years of teaching experience, I requested data from the District on minority-Anglo teacher differences in years of service at Phoenix Union. However, the District did not provide the requested data. Nevertheless, the analysis presented in Table 10 indirectly supported the hypothesis that minority teachers in the PUHSD schools tended to have lower mean years of teaching service. I did not present Tables 10-12 at the time of my testimony, but they are pro-

vided here in a post hoc manner in order to give the reader a sense of the logic used in the testimony pertinent to factor five.

62. Cordova, op. cit., p. 8.

63. Criteria Report, op. cit., p. 17.

64. Review the text (p. 20) prior to Table 4 for a discussion of these two notions.

65. See page 11 for the listing of the five factors included under this criteria.

66. Criteria Report, op. cit., p. 18.

67. Ibid., p. 19.

68. Ibid., p. 83.

69. Cordova, op. cit., pp. 3-4.

70. Felner et al. (1981, pp. 449-450).

71. Bronfenbrenner (1979, p. 8).

72. Ibid., pp. 26-27.

73. Bogat et al. (1980) have referred to these three types of school transition as "normal." Felner et al. (1981), on the other hand, have characterized as "normative shifts" those transfers brought about by promotion (e.g., elementary to secondary school), while extrasystematic single and cumulative transfers due to residential mobility are considered more unpredictable and less normative. In the context of this paper, the Bogat et al. (1980) notion of normality is used, given that school transfers brought out by residential mobility effect 20-30% of public school children and the pupil

turnover rates approximate 50% in schools serving low-income families (Felner et al., 1981).

74. Although the ethnicity of the Hispanic group was not reported, it is assumed the subjects were Puerto Rican, as the study was done in New Haven, Connecticut.

75. Felner et al. (1981, p. 456).

76. For an excellent overview on stress, see Cox (1978).

77. Cox (1978, pp. 3-4).

78. See Phillips (1978) for a discussion of various interpretations of anxiety.

79. Phillips (1978, pp. 61-62).

80. Edwards (1979, p. 58).

81. The general and school anxiety measures included items from the measures used by Saranson and associates in their study of classroom adjustment in Great Britain and the United States (S.B. Saranson, K.S. Davidson, F.F. Lightfall, R.R. Waite, & B. K. Ruebush, _Anxiety in elementary school children_. New York: Wiley, 1960.

82. The idea here is that _integration_, the social process of _desegregation_ in which students of various racial backgrounds are mixed in an attempt to attain equal status, is most important.

83. Ibid., p. 70.

84. Also, see St. John (1981, p. 89) for her contention that disadvantaged children who enter mixed classrooms during desegregation can be expected to show declines in their grades.

85. Gerard and Miller (1975, pp. 84-85).

86. St. John (1981, p. 89).

87. Felice and Richardson (1977a, p. 246).

88. For a detailed description and analysis of the plaintiffs' arguments and scenario of the trial, see Valencia (1980). For a legal analysis and discussion of pertinent case law, see Ah Tye (1982).

89. Valencia (in press, pp. 21-22).

90. Ibid., p. 22.

91. Gerard and Miller (1975, p. 3).

92. Plaintiffs' exhibit No. 20, referred to as "The Workman Memo."

93. Ibid., p. 2.

94. Ibid., pp. 2-3.

95. Plaintiffs' exhibit No. 22, entitled "Summary Report: Five Day Training 'Exploring Change.'"

96. Ibid., p. 4.

97. Ibid., p. 3.

98. See, for example, Brophy and Good (1974) for a discussion of the self-fulfilling prophecy.

99. Based on August, 1982 personal communication with a detective from the Phoenix Gang Squad, the police department's concerns were with a very small number of rival gang members who were expected to enroll at Central.

100. Plaintiffs' exhibit no. 22, p. 4.

101. See page 49 for further discussion of this relation.

102. Plaintiffs' exhibit no. 33.

103. Although very little hard data were presented at the hearing, it was fairly widely accepted by the defendants, plaintiffs, and the court that there were sharp differences in social class between families in the Anglo school and minority school attendance areas.

104. Brophy and Good (1974, p. 16).

105. Plaintiffs' exhibits nos. 36-39.

106. Minority percentage disparity was calculated by subtracting minority total student body percentage (42.4%, a constant) from the minority student percentage in a given class, and then dividing the remainder by the constant of 42.4%. A "plus" percentage indicated overrepresentation, while a "minus" percentage indicated underrepresentation.

107. This contention is partially based on personal communication with Dr. Robert D. Felner (August, 1982) and readings of pertinent literature (e.g., Felner, Gintner, & Primavera, 1982).

108. Felner et al. (1982, p. 279).

109. Plaintiffs' exhibit no. 20, pp. 2-3.

110. For the theoretical underpinnings and empirical base for this contention, the reader might review pages 51-57, which deal with the notion of transition and normative school transition research.

111. Annual Statistical Report. PUHSD, No. 210, pp. 22-27.

112. St. John (1981, p. 99).

113. D. McGowan, Judge rules PUHS must be reopened, Phoenix Gazette, August 31, 1982, A-1, A-4.

114. Cordova, op. cit., pp. 9-10.

115. Ibid., p. 6.

116. Ibid., pp. 6-7.

117. Ibid., pp. 6-7.

118. Ibid., p. 6.

119. In the Angeles case, the issue of bias in closure criteria was somewhat different in that the criteria were applied arbitrarily and through the use of double standards. It appears that it is much more difficult to produce evidence of discriminatory intent under such circumstances. See Valencia (1980) for a discussion of the issue of double standards and closure criteria.

120. Cordova, op. cit., pp. 7-8.

121. McConahay (1978, p. 104).

122. J.W. Brammer, Defendants' Petition for Approval of Alternate to Opening Phoenix Union High School, November 5, 1982. Mr. Brammer, of the Phoenix firm of DeConcini, McDonald, and Brammer, was the counsel for the defendants.

## REFERENCES

Acosta, F. X. Ethnic variables in psychotherapy: The Mexican American. In J. L. Martinez (Ed.), Chicano psychology. New York: Academic Press, 1977.

Acosta, F. X. Barriers between mental health services and Mexican Americans: An examination of a paradox. American Journal of Community Psychology, 1979, 7, 503-520.

Adler, M. Intelligence testing of the culturally disadvantaged: Some pitfalls. Journal of Negro Education, 1968, 37, 364-369.

Ah Tye, K. Equal protection considerations in school closures. Clearinghouse, 1982, 15, 1010-1014.

Amir, Y. Contact hypothesis in ethnic relations. Psychological Bulletin, 1969, 71, 319-342.

Anderson, C. S. The search for school climate: A review of the literature. Review of Educational Research, 1982, 52, 368-420.

Atkinson, J. W., & Feather, N. T. Review and appraisal. In J. W. Atkinson & N. T. Feather (Eds.), A theory of achievement motivation. New York: Wiley, 1966.

Bailey, J. D., Fritschen, L. E., & All, P. A. Declining enrollments: Advancing concerns. Compact, 1978 (Summer-Fall), 4-6.

Bensen, G. P., Haycraft, J. R., Steyaert, J. P., & Weigel, D. J. Mobility in sixth graders as related to achievement, adjustment and socioeconomic status. Psychology in the Schools, 1979, 16, 444-447.

Berger, M. A. Neighborhood schools: The new (?) legal response to enrollment decline and desegregation. *Urban Education*, 1983, *18*, 7-28.

Bogat, G. A. *Life transitions: Applications for community psychology*. Unpublished manuscript, DePaul University, 1978.

Bogat, G. A., Jones, J. W., & Jason, L. A. School transitions: Preventive intervention following an elementary school closing. *Journal of Community Psychology*, 1980, *8*, 343-352.

Bronfenbrenner, U. *The ecology of human development: Experiments by nature and design*. Cambridge, MA.: Harvard University Press, 1979.

Brooks, B. D. *Strategies for reducing violence on the school campus*. Biola College, La Mirada, CA, 1981.

Brophy, J. E., & Good, T. L. *Teacher-student relationships: Causes and consequences*. New York: Holt, Rinehart, and Winston, 1974.

Brown, G., Rosen, N., Hill, M., & Olivas, M. *The condition of education for Hispanic Americans*. Washington, D.C.: National Center for Educational Statistics, 1980.

Bryant, J. C. *Some effects of racial integration of high school students on standardized achievement test scores, teacher grades and drop-out rates in Angleton, Texas*. Unpublished doctoral dissertation, University of Houston, Houston, TX, 1968.

Carter, R. How invalid are marks assigned by teachers? *Journal of Educational Psychology*, 1952, *43*, 218-228.

Carter, T.P., & Segura, R.D. *Mexican Americans in school: A decade of change*. New York: College Entrance Examination Board, 1979.

Clement, D. C., Eisenhart, M., & Wood, J. W. School desegregation and educational inequality: Trends in the literature, 1960-1975. In R. Rist (Ed.), The desegregation literature: A critical appraisal. Washington, D.C.: National Institute of Education, 1976.

Cohen, E. G. Design and redesign of the desegregated school: Problems of status, power and conflict. In W. G. Stephan & J. R. Feagin (Eds.), Desegregation: Past, present, and future. New York: Plenum Press, 1980.

Coleman, J. S., Campbell, E. G., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. Equality of educational opportunity. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1966.

Collins, J. M., & Coulter, F. Effects of geographical movement on the social and academic development of children of army personnel. Australian and New Zealand Journal of Sociology, 1974, 10, 222-223.

Colton, D., & Frelich, A. Enrollment decline and school closings in a large city, Education and Urban Society, 1979, 11, 396-417.

Coney, Y., & West, C. K. Academic pressures and the black adolescent. Contemporary Educational Psychology, 1979, 4, 318-323.

Cox, T. Stress. Baltimore: University Park Press, 1978.

Cramer, W., & Dorsey, S. Are movers losers? The Elementary School Journal, 1979, 70, 387-390.

Darden, J. T., & Jacob, S. Court-ordered desegregation and extracurricular activities: Impact on racial participation and segregation in high school clubs and organizations. Urban Education, 1981, 16, 37-64.

Datta, L., Schaefer, E., & Davis, M. Sex and scholastic aptitude as variables in teachers' ratings of the adjustment and classroom behavior of Negro and other seventh-grade students. Journal of Educational Psychology, 1968, 59, 94-101.

DeLeon, J. Cognitive style difference and the underrepresentation of Mexican Americans in programs for the gifted. Journal for the Education of the Gifted, 1983, 6, 167-177.

Dohrenwend, B. S. Social stress and community psychology. American Journal of Community Psychology, 1978, 6, 1-15.

Dunn, J. A. The approach-avoidance model for the analysis of school anxiety. Journal of Educational Psychology, 1968, 59, 388-394.

Edwards, D. Effects of midterm integration on state and trait anxiety in Black and White elementary children. American Journal of Community Psychology, 1979, 7, 57-70.

Epps, E. G. The impact of school desegregation on aspirations, self-concepts, and other aspects of personality. Law and Contemporary Problems, 1975, 39, 300-313.

Farley, R. Report to the Honorable Judge Paul Egly. Los Angeles County Superior Court, Pomona, CA, 1978.

Felice, L. G., & Richardson, R. L. The effects of busing and school desegregation on majority and minority student dropout rates. Journal of Educational Research, 1977, 70, 242-246. (a)

Felice, L. G., & Richardson, R. L. Effects of desegregation on minority student dropout rates. Integrated Education, 1977, 15, 47-50. (b)

Felner, R. D., Farber, S. S., & Primavera, J. Children of divorce, stressful life events and transitions: A framework for preventive efforts. In R. H. Price, R. F. Ketterer, B. C. Bader, & J. Monahan (Eds.), *Prevention in mental health: Research, policy and practice*. Beverly Hills: Sage, 1980.

Felner, R. D., Ginter, M., & Primavera, J. Primary prevention during school transitions: Social support and environmental structure. *American Journal of Community Psychology*, 1982, *10*, 277-290.

Felner, R. D., Primavera, J., & Cauce, A. M. The impact of school transitions: A focus for preventive efforts. *American Journal of Community Psychology*, 1981, *9*, 449-459.

Figueroa, R. A. Field dependence, ethnicity, and cognitive styles. *Hispanic Journal of Behavioral Sciences*, 1980, *2*, 35-42.

Figueroa, R. A., & Gallegos, E. A. Ethnic differences in school behavior. *Sociology of Education*, 1978, *51*, 289-298.

Gerard, H. B., & Miller, N. *School desegregation: A long-term study*. New York: Plenum Press, 1975.

Glidewell, J. C., Kantor, M. B., Smith, L. M., & Stringer, L. A. *Social structure and socialization in the elementary school classroom*. A report of a workshop to the Committee on Social Structure and Socialization of the Social Science Research Council. Clayton, MO : The St. Louis County Health Department, 1965.

Glidewell, J. C., & Swallow, C. S. *The prevalence of maladjustment in elementary schools*. A report prepared for the Joint Commission on Mental Health of Children. Chicago: University of Chicago, 1969.

Goebel, B. L. Mobility and education. American Secondary Education, 1978, 8, 11-16.

Grambs, J. D. Implications of declining enrollments for teacher age characteristics and educational development. Gerontologist, 1980, 20, 552-560.

Hawkes, T. H., & Furst, N. F. Race, socioeconomic situation, achievement, IQ and teacher ratings of students' behavior as functions related to anxiety in upper class school children. Sociology of Education, 1971, 44, 333-350.

Hawkes, T. H., & Koff, R. H. Differences in anxiety of private school and inner city public elementary school children. Psychology in the Schools, 1970, 7, 250-259.

Henderson, R. W., & Valencia, R. R. Nondiscriminatory school psychological services: Beyond nonbiased assessment. In J. R. Bergan (Ed.), School psychology in contemporary society. Columbus, OH: Charles E. Merrill, in press.

Howell, F. M., & Frese, W. Early transition into adult roles: Some antecedents and outcomes. American Educational Research Journal, 1982, 19, 51-73.

Hughes, L. W., Gordon, W. M., & Hillman, L. W. Desegregating American schools. New York: Longman, 1980.

Jensen, A. R. Bias in mental testing. New York: The Free Press, 1980.

Kagan, S., & Buriel, R. Field dependence-independence and Mexican American culture and education. In J. L. Martinez, Jr. (Ed.), Chicano Psychology. New York: Academic Press, 1977.

Kantor, M. B. (Ed.). *Mobility and mental health*. Springfield, IL: Charles C. Thomas, 1965.

Katz, I. Review of evidence relating to effects of desegregation on the intellectual performance of Negroes. *American Psychologist*, 1964, *19*, 381-399.

Lambert, N. M. Psychological evidence in *Larry P. v. Wilson Riles*. *American Psychologist*, 1981, *36*, 937-952.

*La Red/The Net: Monthly Newsletter of the National Chicano Research Network*, 1982, No. 55, p. 1.

Lazarus, R. S. *Psychological stress and the coping process*.

Leacock, E. *Teaching and learning in city schools*. New York: Basic Books, 1969.

Levine, M. Residential change and school adjustment. *Community Mental Health Journal*. 1966, *2*, 61-69.

Levine, M., Wesolowski, J. C., & Corbett, F. J. Pupil turnover and academic performance in an inner city school. *Psychology in the Schools*, 1966, *3*, 153-156.

Lewin, K. *A dynamic theory of personality*. New York: McGraw-Hill, 1935.

Long, L. Does migration interfere with children's progress in school? *Sociology of Education*, 1975, *48*, 369-381.

Lott, B. E., & Lott, A. J. The relation of manifest anxiety in children to learning task performance and other variables. *Child Development*, 1968, *39*, 207-220.

Mahan, T. W. Project Concern--1966-68: A report on the effectiveness of suburban school placement for inner-city youth. Board of Education, Hartford, CT, 1968.

McConahay, J. B. The effects of school desegregation upon students' racial attitudes and behavior: A critical review of the literature and prolegomenon to future research. Law and Contemporary Problems, 1978, 42, 78-107.

Mercer, J. R. Labeling the mentally retarded. Berkeley: University of California Press, 1973.

Mercer, J., Coleman, M., & Harloe, J. Racial/ethnic segregation and desegregation in American public education. In C. W. Gordon (Ed.), The uses of the sociology of education. Chicago: National Society of the Study of Education, 1974.

Miller, N. Principles relevant to successful school desegregation: A social science statement. Unpublished manuscript. Los Angeles: Social Science Research Institute, University of Southern California, 1977.

Miller, C., McLaughlin, J., Haddon, J., & Chansky, N. Socioeconomic class and teacher bias. Psychological Reports, 1968, 23, 806.

Nelson, W., Knight, G. P., Kagan, S., & Gumbiner, J. Locus of control, self-esteem, and field independence as predictors of school achievement among Anglo American and Mexican American children. Hispanic Journal of Behavioral Sciences, 1980, 2, 323-335.

Orfield, G. School desegregation and white flight. Social Policy, 1976, 6, 24-29.

Pettigrew, T. F. The case for metropolitan approaches to public school desegregation. In A. Yarnolinsky, L. Liebman, & C. S. Schelling (Eds.), *Race and schooling in the city*. Cambridge, MA: Harvard University Press, 1981.

Phillips, B. N. *An analysis of causes of anxiety among children in school*. Final Report Project No. 2616, U. S. Office of Education, Cooperative Research Branch, Austin, TX: University of Texas, 1966.

Phillips, B. N. *School stress and anxiety: Theory, research, and intervention*. New York: Human Sciences Press, 1978.

Power, C. *The effects of communication patterns on student sociometric status, attitudes, and achievement in science*. Unpublished doctoral dissertation, University of Queensland, 1971.

Rickel, A. U., & Smith, R. L. Maladapting preschool children: Identification, diagnosis, and remediation. *American Journal of Community Psychology*, 1979, *7*, 197-208.

Rist, R. Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education. *Harvard Educational Review*, 1970, *40*, 411-451.

Robinson, S. P., Robinson, A., & Bickel, F. Desegregation: A bibliographic review of teacher attitudes and Black students. *Journal of Negro Education*, 1980, *31*, 48-59.

Rosenfield, D., Sheehan, D. S., Marcus, M. M., & Stephan, W. G. Classroom structure and prejudice in desegregated schools. *Journal of Educational Psychology*, 1981, *73*, 17-26.

Rubovits, P., & Maehr, M. Pygmalion black and white. *Journal of Personality and Social Psychology*, 973, *25*, 210-218.

Schaller, J. The relationship between geographic mobility and school behavior. *Man-Environment Systems*, 1975, *5*, 185-187.

Schilhab, J. E. *Influences of psycho-social factors in a newly integrated school*. Unpublished doctoral dissertation, University of Texas, Austin, 1976.

Scott, H. H. Desegregation in Nashville: Conflicts and contradictions in preserving schools in black communities. *Education and Urban Society*, 1983, *15*, 235-244.

Slone, I. W. *The effects of one school pairing on pupil achievement, anxieties and attitudes*. Unpublished doctoral dissertation, New York University, 1968.

Spielberger, C. D., Edwards, C. D., Montouri, J., & Lushene, R. *The State-Trait Anxiety Inventory for Children* (*STAIC*). Palo Alto, CA: Consulting Psychologists Press, 1971.

St. John, N. H. *School desegregation: Outcomes for children*. New York: Wiley Interscience, 1975

St. John, N. H. The effects of school desegregation on children: A new look at the research evidence. In A. Yarnolinsky, L. Liebman, & C. S. Schelling (Eds.), *Race and schooling in the city*. Cambridge, MA: Harvard University Press, 1981.

St. John, N. H., & Lewis, R. G. Race and the social structure of the elementary classroom. *Sociology of Education*, 1975, *48*, 346-368.

Tseng, M. S., & Thompson, D. L. *Need achievement, fear of failure, perception of occupation prestige, and occupational aspiration of adolescents of different socioeconomic groups*. Paper presented at the annual meeting of the American Educational Research Association, 1969.

U. S. Commission on Civil Rights. *Mexican American education study*. Washington, D. C.: Government Printing Office.

Report 1: *Ethnic isolation of Mexican Americans in the public schools of the Southwest*, 1971. (a)

Report 2: *The unfinished education: Outcomes for minorities in the five southwestern states*, 1972. (b)

Report 3: *The excluded student: Educational practices affecting Mexican Americans in the Southwest*, 1972. (a)

Report 4: *Mexican American education in Texas: A function of wealth*, 1972. (b)

Report 5: *Teachers and students*, 1973.

Report 6: *Toward quality education for Mexican Americans*, 1974.

U. S. Department of Health, Education and Welfare. *Dropout prevention*. Washington, D.C.: Educational Resources Information Center, 1975 (ERIC Document Reproduction Service No. ED 105 354).

Valencia, R. R. The school closure issue and the Chicano community. *The Urban Review*, 1980, *12*, 5-21.

Valencia, R. R. The school closure issue and the Chicano community: A follow-up investigation of the *Angeles* case. *The Urban Review*, in press.

Valencia, R. R. Synthesizing a theoretical perspective on Chicano school failure: The testing mechanism. Paper presented at the Ninth Annual Meeting of the National Association for Chicano Studies, University of California, Riverside, April 2-4, 1981.

Valencia, R. R. Psychoeducational needs of minority children: The Mexican American child, a case in point. In S. Hill and B. J. Barnes, (Eds.), Young children and their families: Needs of the 90s. Lexington, MA: Lexington Books, D.C. Heath and Co., 1982.

Wessman, A. E. Evaluation of Project ABC. Final Report of Project No. 5-0549, Washington, D.C.: U.S. Department of Health, Education and Welfare, 1969.

Wills, T. A., & Langer, T. S. Socioeconomic status and stress. In I. L. Kutash, L. B. Schlesinger, & Associates (Eds.), Handbook on stress and anxiety. San Francisco: Jossey-Bass, 1980.

Wilson, A. Social stratification and academic achievement. In A. H. Passow (Ed.), Education in depressed areas. New York: Teachers College, Columbia University, 1963.

Yee, A. Interpersonal attitudes of teachers and advantaged and disadvantaged pupils. Journal of Human Resources, 1968, 3, 327-345